ASSESSMENT OF ALCOHOL AND DRUG USE IN THE PRIVATE SECTOR IN KENYA

By

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OCTOBER, 2013

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ABBREVIATIONS AND ACRONYMS

Abbreviation	Description
ADA	Alcohol and Drug Abuse
APA	American Psychological Association
CDC	Centers for Disease Control and Prevention
CISO	Confederation of Informal Sector Organizations
FKE	Federation of Kenya Employers
HEAPC	Health Education and Promotion Council
KNFJKA	Kenya National Federation of Jua Kali Associations
KNBS	Kenya National Bureau of Statistics
KEPSA	Kenya Private Sector Alliance
NACADA	National Authority for the Campaign Against Alcohol and Drug Abuse
NISCO	National Informal Sector Coalition
NIAAA	National Institute on Alcohol Abuse and Alcoholism
SME-EA	Small and Medium Enterprise Support, East Africa
SAMHSA	Substance Abuse and Mental Health Administration
USDHHS	United States Department of Health and Human Services
WHO	World Health Organization

ACKNOWLEDGEMENTS

We extend our sincere gratitude to all the Research Assistants for their patience, dedication and hard work and without whom this data collection would have been impossible: Alicia Wangui, Bonaventure Ngala, Phaustine Ogweno, Bernard Odette, Julius Manono, Millicent Achieng and Migdad Hussein.

We thank the National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA) for the funding opportunity that made this research possible and for the technical support and advice from Mr. Morris Kamenderi.

Access to the Private Sector would have been a difficult venture without support from Ms. Pascalina Kagunda, the Membership Development Manager of the Kenya Private Sector Alliance (KEPSA), Mr. Richard Muteti, the Director at Small and Medium Enterprise Support, East Africa (SMES,EA) and Chief Executive Officer at Kenya National Federation of Jua Kali Associations (KNFJKA), Mr. Nicholas Mugambi, County Enterprise Development Officer, Nairobi, Ministry of Labor, Mr. Anthony Omerikwa, Manager Research and Development, NSSF and Mr. Hesbon Kasasi, Data Manager, NSSF.

Our gratitude also goes to Dr. Adeola Jaiyeola and Mr. Favian Kennedy of the both of whom provided technical, research support and guidance.

Finally, we thank all the formal and informal sector participants and organizations that were willing to participate in this project and for all the data they provided that will supply valuable insight into the challenges of alcohol and drug abuse within the private sector.

EXECUTIVE SUMMARY

The National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA) is committed to promoting the health and wellbeing of Kenyans by reducing the demand for alcohol and drugs through preventive education, improving life skills, and the provision of treatment, rehabilitation and psycho-social support to communities. ADA research in workplaces reveals the high costs employers and countries incur as a result of increasing expenditures in health care, workplace injuries, workplace violence, disability payments, increased turnover and productivity losses (USDHHS-SAMHSA, 2009). While NACADA has achieved several milestones in its efforts to conduct quality research on alcohol and drug abuse in Kenya to guide the country's drug abuse policies and programmes, there was still inadequate data on ADA within the private sector. This study sought to bridge this important gap.

Qualitative results indicated that there was general consensus between the formal and informal sector interviewees that alcohol and drug use among workers was a problem that needed to be addressed and created significant issues like absenteeism, lack of punctuality, low productivity, high cost in worker replacement, theft and occasionally violence in the workplace particularly within the informal sector. Interviewees agreed that something needed to be done to help the situation.

The prevalence of lifetime use for alcohol among private sector employees was 65.9% compared to the public sector (57.90%; NACADA, 2011). When segregated by sector, findings revealed that formal sector employees had a slightly higher lifetime prevalence of alcohol use than their informal sector counterparts (66.9% and 64.9% respectively). The prevalence of lifetime use for tobacco among private sector employees was 28.3% compared to the public sector (23%; NACADA, 2011). Lifetime tobacco use was higher among informal sector employees (informal = 32.2%; formal = 24.8%). The prevalence of lifetime use for chewing tobacco, snuff or *kuber* among private sector employees was 8.8%. Informal sector employees were 2.7% more likely to have used smokeless/chewing tobacco in their life compared to formal sector employees (10.2% and 7.5%, respectively). Lifetime *miraa* use was higher in the private sector (25.3%) compared to the public sector (15.9%). Informal sector employees had a higher lifetime *miraa* use (30.6%) than their formal sector counter parts (20.7%). The prevalence of lifetime bhang/marijuana use among private sector employees was 14.7%. When delineated by sector, informal sector employees were more likely to have used bhang/marijuana in their life (9.3%) compared to formal sector employees (5.4%). The prevalence of lifetime cocaine use among private sector employees was 0.8%. When delineated by sector, informal sector employees were more likely to have used cocaine in their life (1.1%) compared to formal sector employees (0.5%). The prevalence of lifetime heroin use among private sector employees was 0.5%. When delineated by sector, informal sector employees were more likely to have used heroin in their life (0.8%) compared to formal sector employees (0.2%). The prevalence of lifetime prescription drug use among private sector employees was 8.9%.

When delineated by sector, informal sector employees were more likely to have used prescription drugs in their life (9.7%) compared to formal sector employees (8.2%).

The prevalence of 12-month use for alcohol among private sector employees was 41%. In the past 12 months, more formal sector employees had used alcohol (43%) compared to their informal sector counterparts (38.7%). On most typical days, both men and women in the private sector consumed 4 or less drinks but males were more likely to binge or consume more than 5 drinks on a typical day. Informal sector employees are more likely to have used cigarette/pipe in the past 12-months (17.2%) compared to the private sector as a whole (14.3%) and formal sector employees (11.8%). The 12-month prevalence of smokeless/chewing tobacco use in the private sector was highest among informal sector employees (5.1%) compared to the private sector as a whole (4.1%) and the formal sector (3.1%). Informal sector employees are more likely to have used *khat*/*miraa/muguuka* in the past 12-months (18.0%) compared to the private sector as a whole (13.8%) and formal sector employees (10.1%). Informal sector employees are more likely to have used bhang/marijuana in the past 12-months (8.6%) compared to the private sector as a whole (5.3%) and formal sector employees (2.4%). 12-month prevalence for cocaine use was 0.1% in the private sector as a whole and 0.2% in the formal sector. 12-month prevalence for heroin use was 0.3% in the private sector as a whole, and 0.3% in the informal sector and 0.2% in the formal sector. Informal sector employees are more likely to have used prescription drugs in the past 12-months (5.9%) compared to the private sector as a whole (5.6%) and formal sector employees (5.3%).

Private sector employees were more likely to be current drinkers (35.4%) compared to the public sector (33%; NACADA 2011). In the past 30 days, there was no significant difference in alcohol use between formal sector employees (35.6%) and their informal sector counterparts (35.2%). The prevalence of 30-day cigarette/pipe was 13.8% in the private sector, 11.6% in the informal sector and 11.3% in the formal sector. The 30-day prevalence of smokeless/chewing tobacco use in the private sector was highest among informal sector employees (4.0%) compared to the private sector as a whole (3.2%) and the formal sector (2.4%). Informal sector employees are more likely to have used *khat/miraa/muguuka* in the past 30 days (15.0%) compared to the private sector as a whole (10.9%) and formal sector employees (7.2%). Informal sector employees are more likely to have used bhang/marijuana in the past 30 days (6.4%) compared to the private sector as a whole (4.1%) and formal sector employees (1.9%). 30-day prevalence for cocaine use was 0.1% in the private sector as a whole and 0.2% in the formal sector. 30-day prevalence for heroin use was 0.3% in the private sector as a whole, 0.3% in the informal sector, and 0.2% in the formal sector. Informal sector employees are more likely to have used prescription drug in the past 30 days (4.3%) compared to the private sector as a whole (3.4%) and formal sector employees (2.6%). It is important to note that unlike all the other drugs, females in the private sector were more likely to have used prescription drug in the past 30 days (3.8%) compared to males (3.3%).

Recommendations include the following:

1. A more systematic research within the private sector. Alcohol and drug use is a problem within the private sector just as it is within the nation and in the public sector. Since this study is not representative of the entire private sector, more rigorous studies should be conducted in the future. Future studies should also focus specifically on either sector, formal or informal to really capture the unique differences that define each sector and that may encourage or deter alcohol and drug use.

2. Focus on prevention among the youth. With the age of initiation ranging between 18-21 years of age, prevention efforts should be geared towards the youth at a very young age, sensitizing them and their parents to the dangers of alcohol and drug abuse.

3. Stricter enforcement of existing alcohol and drug laws. Stricter laws and policies should be put in place and enforced to reduce the use of alcohol particularly. While there is not an evidently significant use of the other illicit drugs, laws should be put in place to reduce their influx into the work settings.

4. Clearer and stricter regulation of the illicit brews.

5. Adaptation of a systemic approach to prevention that includes social, environmental, & individual factors. Participants from both the formal and informal sector acknowledged that the weight of the prevention and treatment of ADA use falls on every individual, business, community and the government. Even though all these sectors had a role to play, a lot of weight was placed on the role of the government in ensuring the implementation and regulation of stricter laws and the creation of awareness on the dangers of ADA use.

6. Increased access to treatment and increased education on the effects of ADA use by the government, organizations like KEPSA and FKE.

7. Increased education on existing treatment and rehabilitation programs.

1.0 INTRODUCTION

Alcohol and Drug Abuse (ADA) is a critical factor affecting workplaces today, with the potential of negatively affecting the health, safety, productivity and performance of employees (NACADA 2012; NACADA 2011; NACADA 2009). Alcohol and drug abuse research in workplaces reveals the high costs employers and countries incur as a result of increasing expenditures in health care, workplace injuries, workplace violence, disability payments, increased turnover and productivity losses (USDHHS-SAMHSA, 2009). While NACADA, has achieved several milestones in its efforts to conduct quality research on alcohol and drug abuse in Kenya to guide the country's drug abuse policies and programmes, there was still inadequate data on ADA within the private sector. This study sought to bridge this important gap by providing information to NACADA, government departments, policy makers, directors of private sector organizations and companies, Kenya Private Sector Alliance (KEPSA), Federation of Kenya Employers (FKE), National Informal Sector Coalition (NISCO), Confederation of Informal Sector Organizations (CISO) East Africa, Kenya National Federation of Jua Kali Associations (KNFJKA) and the Ministry of Labor, employees in the private sector, and the public in general on the extent and impact of ADA within the private sector. The goal of the research was to provide avenues for employers and other stakeholders including policy makers to understand addiction and its impact on the private sector, the prevalence of ADA among working adults in the private sector and the costs related to ADA. Policies that encourage a reduction in employee ADA use can help employers improve productivity, reduce workplace injuries and decrease healthcare costs.

All over the world, worksites, whether formal or informal are very important public health settings because a majority of adults spend considerable amounts of time in these settings which in turn play a significant role in their health and wellbeing. Ensuring healthy work environments as well as the management of employee health behaviors is therefore an essential element not only on overall productivity for the organizations served but also on employee wellness. The cost of alcohol and drug abuse to employers is enormous, both socially and financially. In addition to the impacts on the organization, personal impacts on individuals with ADA related issues include failure to fulfill obligations at home, the use of substance in physically hazardous places (e.g., when driving), recurrent substance related legal or financial problems, and continued use of the substance despite its social or interpersonal problems (APA, 1994). In 2011, NACADA conducted an alcohol and drug abuse situation analysis among employees in the public sector institutions in Kenya. The findings revealed that 56% of public officers had drunk alcohol, 23% had used tobacco products, 16% had chewed Miraa, 6.6% had used bhang, and 1.3% had used other drugs including heroin or cocaine at least once in their lifetime (NACADA, 2011). The findings further indicated that alcohol was the most abused substance with a prevalence of 33% among public-sector employees (NACADA 2011).

The public sector study revealed the detrimental effects of alcohol and drug abuse on the productivity, safety and welfare of the public institutions and the community as a whole in Kenya, with predicted future negative impact on the country's development targets including the achievement of Vision 2030 (NACADA, 2011).

According to a 1993 World Health Organization Technical report on alcohol and drug abuse in the workplace, in some countries, drugs are regarded as stimulants that enhance work performance. The report provides examples of some countries in East Africa, particularly Ethiopia, Kenya, Somalia and Tanzania, where *khat* is used widely and believed to improve performance in occupations that require sustained alertness, vigilance or wakefulness like, long distance driving and security duties (WHO, 1993). The authors of the WHO technical report note that some employees may be at personal risk for ADA as a direct result of the nature of their jobs or their access to alcohol and drugs (e.g. retailers of alcoholic beverages, pharmaceutical workers and employees in high-pressure-low supervision job) while others in the society or workplace may be at risk from activities of those workers whose jobs involve decision-making (e.g. public transport, nuclear industries and hospitals; WHO 1993). In the US, results from the 2007 national survey on drug use and health indicate that of the 20 million adults classified as having problems with substance dependence or abuse, approximately 12,000,000 people were employed full-time (USDHHS, 2007). In addition to the high cost of healthcare, alcohol and drug abuse leads to increased absenteeism, lower job productivity and performance as well as reduced safety for other employees (Slavit et al, 2009; Graham et al, 1998). In another United States survey, it was established that farm residents who drank more frequently had significantly higher farm work injury incidence rates (3.35 per 100,000 person days of observation) than those who drank less frequently (1.94 injuries per 100,000 person days; Stallones & Xiang, 2003). According to a 1990 study conducted by Pan American Health Organization in Costa Rica, it was estimated that 30% of absenteeism and workplace accidents was as a result of alcohol dependence. In another study by association sources from India, 15-20% of absenteeism and 40% of work accidents were due to alcohol consumption (Saxena, Sharma & Maulik, 2003).

The potential magnitude of alcohol and drug abuse in the private sector in Kenya cannot be ignored. According to a report by KEPSA on the private sector development in Kenya, the private sector dominates the country's economic activities taking 87% of the Monetary Economy's GDP in 2000, 85% in 2001, 84% in 2002 and 86% in 2003 (KEPSA, 2011). In terms of employment, the country's total formal employment grew from 1,695,300 employees in 2000 to 1,727,700 in 2003. In particular, the private sector contributed the bulk of this employment at 59% in 2000 and 62% in 2003 (KEPSA, 2011). Within the private sector, Kenya is also endowed with an informal economic sector, commonly known as the "Jua Kali" sector, which comprises of small-scale business men and women engaging in income generating activities (Orwa, 2007). The informal economic sector is characterized by small-scale operations, most of which are local and are mainly for subsistence.

According to a report by Gibson. N. Amenya of the University Of Nairobi, Kenya's informal sector is large and dynamic, with 95% of the countries' businesses and entrepreneurs found within this sector (Amenya, 2007). The Economic Survey published by Kenya's National Bureau of Statistics estimates that in 2002, the informal Jua Kali sector employed 5.1 million persons, an increase from 4.2 million individuals in 2000 (KNBS, 2002).

In 2010, the Economic Survey estimates that the Jua Kali sector employs 8.3 million people (KNBS, 2010). These numbers, both in the formal and informal private sector are significant to this study, as they speak volumes about the considerable effect that alcohol and drug abuse would have on the economy. With such high numbers of alcohol and drug use among employed individuals worldwide and specifically in Kenya, it is vital that research on the magnitude and impact of ADA be extended to the private sector organizations and their employees. As noted in prior sections, the findings will enable NACADA, the government and the private sector as a whole to begin to develop organizational policies for providing wellness assistance to their employees and to develop comprehensive workplace policies on alcohol and drug abuse.

2.0 RESEARCH QUESTIONS AND RESEARCH OBJECTIVES

In view of the need to assess the magnitude and impact of alcohol and drug abuse[1] in the private sector, the research questions where:

1. What is the prevalence of alcohol and drug use among formal and informal private sector employees?

2. What are the social, health and economic impacts of alcohol and drug use within the private sector?

Specific objectives of the project were:

1. To establish the prevalence of alcohol and drug use among formal and informal private sector employees.

2. To establish the effects resulting from alcohol and drug use, including but not limited to absenteeism, lower productivity, staff turnover, and health care or medical insurance coverage costs.

3. To determine the attitudes and beliefs of formal and informal private sector workers about alcohol and drug abuse.

4. To determine the knowledge and use of drug addiction support and treatment in the country.

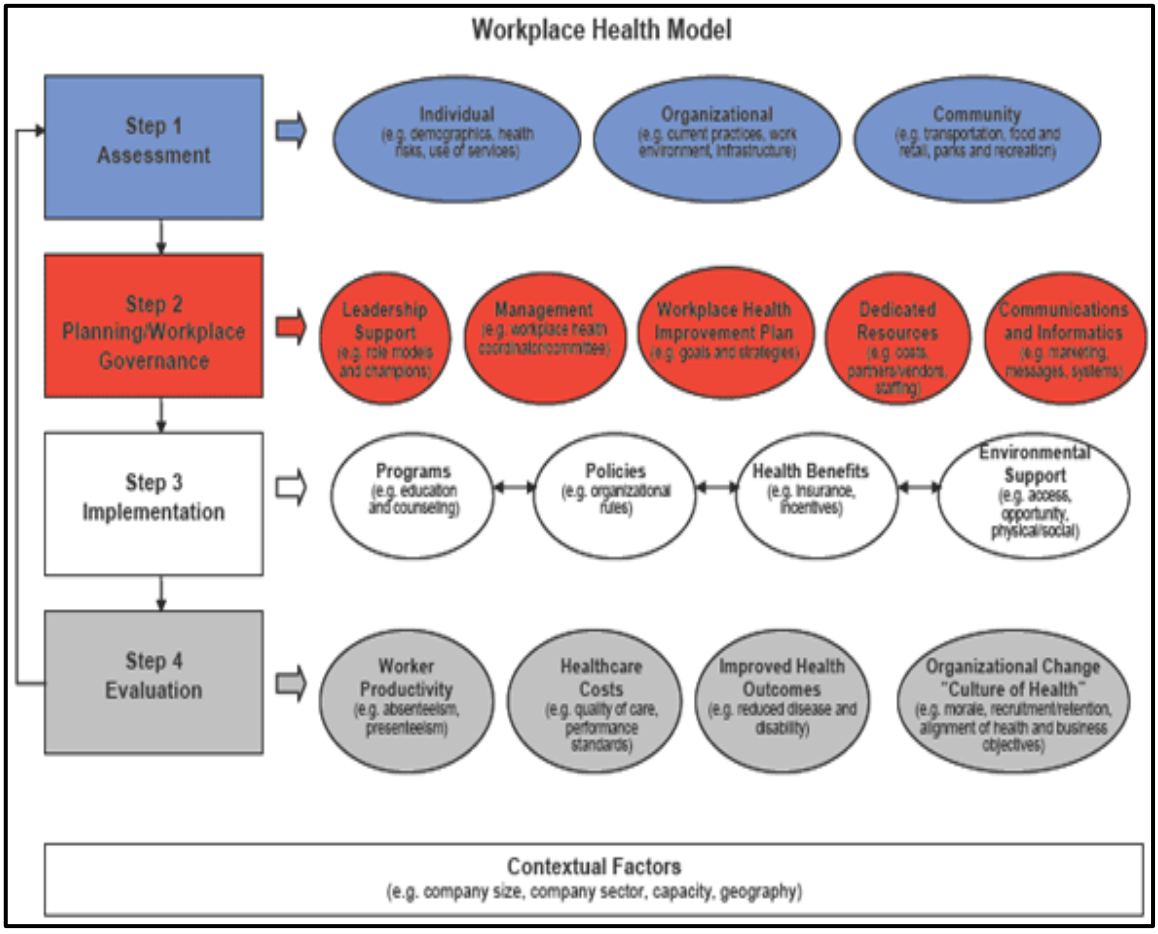
5. To establish the role NACADA can play in assisting the private sector deal with alcohol and drug use within the work place.

[1] Other drug use includes but is not limited to the use of marijuana, *khat/miraa*, tobacco, heroin, cocaine, mandrax, inhalants and solvents, prescription drugs.

3.0 THEORETICAL AND CONCEPTUAL FRAMEWORK

The study is based on the Centers for Disease Control and Prevention (CDC) Workplace Health Model (see figure 1 below) that involves a coordinated systematic approach whose goal is a planned, organized, and comprehensive set of programs, policies and benefits, and environmental supports geared towards meeting the health and safety needs of employees (CDC, 2012). The framework emphasizes four main steps including Assessment, Planning, Implementation and Evaluation. While this project aimed to achieve each of the four goals through dissemination of the study results, its main focus was on the assessment phase.

Figure 1: Workplace Health Model



Source: Centers for Disease Control and Prevention (2012) at http://www.cdc.gov/workplacehealthpromotion/model/index.html

1. **Assessments:** This involves defining employee health risks and concerns as well as the existing health promotion activities, capacity and needs. The current study

employed a survey questionnaire whose goal was to assess prevalence of ADA and health-risk behaviors associated with ADA in the workplace. The study also utilized qualitative key informant interviews conducted with executives or managers with the goal of assessing some of the financial costs and social costs incurred as a result of ADA e.g., absenteeism, health care costs, workplace fights etc.

2. **Planning and Workplace Governance:** This includes the development of the components of a workplace health program by outlining the goals, determining priorities and building organizational infrastructure. Data collected from the survey and key informant interviews will be utilized to assist formal and informal private sector organizations in collaboration with NACADA to:

    a. Establish a health surveillance and monitoring system that captures data related to ADA and health-risk behaviors among formal and informal private sector employees.

    b. Establish baseline data for major ADA workplace indicators against which future progress can be measured.

    c. Evaluate the impact of broad organizational, national, and voluntary agency efforts to improve health and decrease health-risk behaviors associated with ADA in the workplace.

    d. Increase the availability of workplace, both private and public comparison data which can be used to identify disparities by comparing workplace estimates to national benchmarks.

3. **Implementation:** Defines the steps and strategies to put health promotion interventions in place and make them available to employees. As part of dissemination and reporting, the research team will work with NACADA, the private sector alliance, KEPSA, NISCO, directors of private sector organizations and companies, FKE, CISO - EA, KNFJKA and the Ministry of Labor to identify and put in place strategies and policies that will prevent and reduce the impact of ADA in the workplace, as well as develop policies that allow those who have addiction issues to receive the treatment they need without an impact on their employment.

4. **Evaluation:** Includes the investigation of the impacts of programs and policies in place. Data gathered from this assessment will inform future programs and help change or modify existing ones. The research team will work in collaboration with the KEPSA, NISCO, FKE, the Ministry of Labor and NACADA to develop effective dissemination strategies. NACADA has extensive experience disseminating research materials and findings, as well as synthesizing and rewriting the data to make it understandable and useable for policy makers, researchers and other audiences. To ensure that results from the study are used by researchers, policymakers and stakeholders in the private sector, the project team will adapt innovative dissemination methods that include individual consultations with

management teams within the corporate, informal sector associations and business organizations, group trainings for corporate and non-corporate staff, newspaper articles, science to community reports, fact sheets, local community websites and radio stations, conference presentations, publications in peer-reviewed journals as well as newsletters and articles in local magazines.

Source: Centers for Disease Control and Prevention (2012) at http://www.cdc.gov/workplacehealthpromotion/model/index.html

4.0 METHODOLOGY

4.1 Study Coverage

The study is a national study that targeted the formal and informal Jua Kali private sector employees in the country. According to the KNBS (2012), Kenya facts and figures, the private sector industry employed a total of 1,124,900 people in 2011. According to the Economic Survey published by Kenya's Bureau of Statistics, employment within the Jua Kali Sector was 8.3 million people in 2010. The samples from both sectors were drawn from select counties within the 8 regions (Central, Coast, Eastern, Nairobi, North Eastern, Nyanza, Rift Valley and Western regions) as will be detailed in subsequent sections. Since each Region has more than one county, the county with the largest population in the region was selected (Table 1). This applied to all regions except the Rift Valley. In the Rift Valley, two counties with the largest populations were selected because the Rift Valley is the largest region in the country with a very large population and runs the length of the country from the North to the South.

Table 1: Sampling counties for informal and formal private sector employees indicating county population

REGION	COUNTY	COUNTY POPULATION
Central	Kiambu	1,623,282
Coast	Kilifi	1,109,735
Eastern	Meru	1,356,301
Nairobi	Nairobi	3,138,369
North Eastern	Mandera (Not sampled)	1,025,756 (Not sampled)
Nyanza	Kisii	1,152,282
Western	Kakamega	1,660,651
Rift Valley	Nakuru	1,603,325
Rift Valley	Uasin Gishu	894,179

Due to lack of complete and current lists of registered private sector organizations in the country and refusals by many organizations to participate in the study, randomization was not possible. Convenient sampling was utilized to include private sector organizations in the study. Additionally, the informal Jua Kali sector does not have a defined structure but is characterized by a growing number of associations in an attempt to create structure within the sector hence the associations selected for participation were also handpicked and based on those that were willing to participate in the study. The research team worked closely with County Secretaries, the Micro and Small (Jua Kali Sector) Federation, NISCO and KNFJA to identify potential participating organizations and associations.

4.2 Study Population

The study was designed to generate both quantitative and qualitative data. The survey study group consisted of all adults aged 18 and older employed in the formal or informal Jua Kali sectors. All individuals 18 and older employed within the private sector industry were legible to participate in the study. As a national study, the researchers did not specifically set out to seek vulnerable populations but it was reasonably assumed that there may be vulnerable groups e.g., pregnant women, individuals with disabilities etc. who would be employed within the private sector, hence they were treated as the general population since the study was not directed specifically at them.

To be included in the study, all participants were required to minimally have the ability to communicate with clarity and with cognitive understanding (defined as a clear understanding of the study and an ability to consent to participate) hence cognitively impaired individuals were not legible to participate in the study. Individuals 17 and below were also not eligible to participate in the study. As noted in prior sections, convenient sampling was utilized due to lack of complete, current and comprehensive lists for registered formal sector organizations. Additionally, many organizations were unwilling to participate making randomization impossible. As such, the results of the study while not generalizable to the entire private sector, provide basic insight into the alcohol and drug use related issues employees and employers are experiencing within the sector.

To recruit from the formal sector, the study team relied on the most current phone book listings and called every listed organization in selected counties, requesting permission to participate in the study. All organizations that granted permission were included in the study. To recruit from the informal sector, the study team worked closely with County Secretaries, the Micro and Small (Jua Kali Sector) Federation, NISCO and KNFJA to identify potential participating organizations and associations. Since the study was not randomized at the participant level, directors and association leaders identified respondents within each organization/association that would be willing to participate. Once potential participants were identified, Research Assistants utilized a face-to-face contact script to identify themselves, describe the study, assure confidentiality and begin the interview process.

Qualitative data relied on key informant interviews with key personnel including the executives and managers as well as chairpersons of the informal sector associations. The goal of these interviews was to elicit rich qualitative data aimed at providing further insight into who was most affected by ADA, perceptions of why people used drugs, attitudes towards those who used drugs, information of drug addiction support and ways in which NACADA could assist the private sector in dealing with ADA in the workplace.

4.3 Sampling Methods and Design

For survey participation, an online sample size calculator from Maccorr Research Solutions 2012 available at www.maccorr.com was utilized. A sample size of 1067 people from both the formal and informal sectors was utilized for the study. The sample size was calculated with a 95% Confidence Level and a 3.0% Confidence Interval (margin of error). The sample size was drawn from a total of 9,424,900 formal and informal private sector employees. Of the total 1067 target, a total of 790 respondents participated in the study (74% response rate). 417 (52.78%) respondents were employed in the formal sector and 373 (47.22%) respondents were employed in the informal sector. The samples from both sectors were drawn from select counties within the 8 regions (Central, Coast, Eastern, Nairobi, North Eastern, Nyanza, Rift Valley and Western regions). Counties with the largest population in each region were selected for inclusion except for the Rift Valley in which two counties with the largest populations were selected. This is because the Rift Valley is the largest region in the country with a very large population and runs the length of the country from the North to the South. Mandera was eventually eliminated from the study due to a large number of refusals and difficulty reaching many of the organizations. Also, at the time of data collection, there were reported cases of political instability in the North Eastern region, rendering it insecure to send research assistants to the area.

For Key Informant Interviews, at each selected formal organization, participation was sought from the executive director, the supervising manager, human resource managers and other employees identified by their organization as the best individual to provide the information related to who was most affected by ADA, perceptions of why people used drugs, attitudes towards those who used drugs, information of drug addiction support and ways in which NACADA could assist the private sector in dealing with ADA in the workplace. Within the informal industry, chairpersons of the identified associations were included.

Consent was sought from each participant complying with the National Commission for Science, Technology and Innovation (NACOSTI) Research Review Board policies and the Moi University Institutional Research and Ethics Committee (IREC).

4.4 Data Collection Procedures

The study was designed to generate both quantitative and qualitative data. A survey tool was developed from existing surveys that have been tested for reliability developed by NACADA and other research organizations. The questionnaire was developed in English and translated into Swahili as well with the assumption that those with formal and informal employment have a basic understanding of either language. The major themes in the survey instruments included: Demographic information (age, gender, educational background, marital status, position of employment); Lifetime use of tobacco, alcohol and other drugs; Age at first use; Past 30-day use; Past-year use; Frequency of use; Attitudes towards tobacco, alcohol and other drugs; Personal health; Health care coverage and access; Social support systems; and Counseling, treatment and rehabilitation.

The survey questionnaire was pre-tested in Murang'a County (which was not included in the final data set) to estimate the length of time each interview would take, to identify questions that were confusing, that may elicit no response or that may be problematic for other reasons. A final interview guide was developed after necessary corrections and modifications were made and approved by NACADA. Table 2 outlines the research questions and study population assessed quantitatively.

Qualitative data relied on key informant interviews with directors and chairpersons of the informal sector associations and key personnel from the formal sector organizations identified by their organizations as the best individuals to speak on some of the alcohol and drug abuse related issues. They included human resource directors, executive directors, supervisors and administrators serving in varying capacities within their organizations. Like the survey data, the data provided by the key informant interviews are also intended to inform the public health stakeholders, policy decision makers, informal sector association leaders, NACADA, the government, the private sector as a whole, and other community leadership on the prevalence of alcohol and drug related risks, attitudes and beliefs related to ADA use, information of drug addiction support and ways in which NACADA could assist the private sector in dealing with ADA in the workplace.

Table 2: Study objectives and study population

Research Objective	Study Populations	Research Methods
To establish the patterns of alcohol and drug use among formal and informal private sector employees	Informal and formal private sector employees, managers and executives	Survey Questionnaire
To determine the attitudes and beliefs of formal and informal private sector workers about alcohol and drug abuse	Informal and formal private sector employees, managers, executives	Survey Questionnaire, Key Informant Interview
To determine the impacts of ADA use	Informal and formal private sector employees, managers, executives and informal sector association chairpersons	Survey Questionnaire Key Informant Interview
To determine the knowledge and use of drug addiction support and treatment centers in the country	Informal and formal private sector employees, managers, executives	Survey Questionnaire, Key Informant Interview
To determine the role NACADA can play in assisting the private sector deal with alcohol and drug use within the work place.	Informal and formal private sector employees, managers, executives	Survey Questionnaire, Key Informant Interview

4.5 Data Analysis and Management

The data from completed surveys was entered into EPI INFO 7, a questionnaire developing, data collection and analysis surveillance software developed by the Centers for Disease Control and Prevention (CDC). The Lead Researcher created the questionnaire and database on EPI INFO 7. The Lead Researcher utilized the EPI INFO 7 analysis module to analyze data. Data screening was accomplished by: examining rouge and/or outlaying variables; examining unexpected or improbable bivariate relationships. To analyze survey data and provide a surveillance summary, frequency distributions and cross tabulations were calculated for each item on the survey utilizing EPI INFO 7 providing reports where possible for the formal and informal sectors and in some cases as a combination of the two if determined as the best representation of the data set. Analysis examined the relationships of several key variables. As noted, the data gathered was from a convenient sample and while providing some basic insight into the alcohol and drug abuse issues within the formal and informal private sector organizations, cannot be generalized to the entire private sector.

Twenty-six interviews were transcribed verbatim. This method, referred to as orthographic transcription, contributes to analysis and readability of the interview transcripts but does not take into account the indicators of style and dialect (Gumperz & Berenz, 1993). Data were analyzed using inductive thematic analysis. Analytic induction involves the formulation of ideas from raw information in the process of coding data, a method known as constant comparison (Glaser & Strauss, 1967; Strauss & Corbin, 1998). Constant comparison involves two types of coding: open coding and axial coding (Baxter & Babbie, 2004). At the completion of data collection and transcription, the Lead Researcher, read and re-read the transcripts to understand the material while identifying patterns and themes. She began with the formal sector key informant interviews and followed with the informal sector key informant interviews, many of which were done in Swahili. For reporting purposes, direct quotations utilized were translated to English. After the first reading of the transcripts, possible patterns within and across groups were noted for further analysis. In the second reading, data were broken down into categories and examined for each group (Formal & Informal). As each transcript was read and re-read, coding categories were developed separately for each group. Within-group analyses were conducted for the formal and the informal sector groups separately. For each group, code categories developed were compared among participants. This process of comparing code categories among participants was first done with the formal sector group followed by the informal sector group. In the process of each within-group analysis, extensive notes were taken and memos created for each group separately. After satisfactorily comparing codes within each group, the code categories were compared across the formal sector group and the informal sector group. Code categories developed for the formal sector group was compared to code categories developed for the informal sector group. The aim was to identify similarities and differences between the codes developed for the two groups. More notes were taken and memos created as each difference and similarity was noted across the two groups. In addition to reading the transcripts, the audiotaped versions were replayed.

As each transcript and the already developed codes were read, all themes were reassessed and possible relations between them determined, each time making connections between a category and its subcategories (Strauss & Corbin, 1990) Links between categories were created by grouping similar concepts and in the process of coding emergent themes were compared to previously identified themes to determine if they were new or similar. A key to axial coding is the process of memo writing. Memo writing allowed for further reflections and insight into the theme relations and the reasons they were connected. According to Rice & Ezzy (1999), "Memos are small pieces of analysis that derive from the interaction of the raw material with the researcher's creative and social scientific sensitivities" (p. 201). While memo writing is a key aspect of this part of the analysis, it is an ongoing process throughout the data collection. In the axial coding stage memo writing provided a platform for integrating ideas and thoughts generated throughout the data collection process.

5.0 STUDY RESULTS

5.1 Demographic Characteristics

Table 3: Demographic characteristics

Variable	Proportion (%)	Total (n)
Gender		
Male	73.4	580
Female	26.6	210
Age		
18-24	16.6	131
25-35	49.1	388
36 and above	32.3	255
Marital status		
Single/ never married	31.4	248
Married/ living with partner	62.9	497
Divorced/ widowed/ separated	4.6	37
Religion		
Christian	95.7	756
Muslim	2.9	23
Others	0.6	5
Education status		
No formal education	2.3	18
Primary level	25.1	198
Secondary level	37.2	294
Certificate/ diploma level	25.9	205
University degree and above	9.4	74
Monthly income		
Ksh 0-10,000	33.8	267
Ksh 10,001-30,000	42.1	332
Ksh 30,001-50,000	6.1	48
Ksh 50,001 and above	7.7	61
Sector type		
Formal	52.8	417
Informal	47.2	373
Private sector	**100.0**	**790**

Participant Demographics

A total of 790 respondents were recruited and participated in the survey portion of the study. Of the total number of private sector respondents, 73.4% were males and 26.6% were females (Table 3). Of the total number of respondents, 417 (52.8%) were from the formal sector and 373 (47.2%) were from the informal Jua Kali sector. Majority of the respondents from the private sector were aged between 18 and 35 years (65.7%), with the highest group aged between 25-35 years (49.1%). 16.6% of the respondents were between the ages of 18-24 years and 32.3% were 36 years and above (Table 3). As indicated in Table 3, majority of the private sector participants were married (62.9%) or single/never married (31.4%). Majority of the respondents in the private sector indicated that they were Christians (95.7%). The remaining respondents indicated that they were either Muslim or of other religious affiliations (3.5%; Table 3). Majority of the respondents from private sector had secondary education (37.2%) followed by diploma or certificate holders (25.9%), those with primary education (25.1%), those with university degree and above (9.4%), and those without formal education (2.3%; Table 3). Majority of the private sector respondents had an income of Ksh. 10,001-30,000 (42.1%). 33.8% of the respondents had an income of Ksh. 0-10,000 and 13.8% had an income of Ksh. 30,001 and above (Table 3).

A total of 26 key informant interviews were conducted. Of the total, 9 were conducted with informal sector association leaders, while a total of 17 were conducted with formal sector representatives serving different capacities that included the human resource managers, directors, supervisors and administrators. Like the quantitative surveys, the interviewees were based on a convenient sample of only those willing to participate. Pre-testing of the key informant interview guide was conducted in Murang'a County. On average, both the formal and informal sector interviews lasted for 17 minutes. All interviews were recorded and transcribed for analysis. Many of the informal sector interviews were conducted in Swahili and hence were transcribed in Swahili and quotations translated in English for purposes of consistency in the report. The average age of respondents willing to provide their age was 40 years. The years in service in positions within the formal and informal sectors ranged from 1 year to 15 years.

5.2 Alcohol Use

5.2.1 Lifetime Alcohol Use

Table 4: Lifetime alcohol use

Variable	Lifetime alcohol use (%)	Total (n)
Gender		
Male	75.0	580
Female	41.0	210
Age		
18-24	55.7	131
25-35	63.9	388
36 and above	72.5	255
Marital status		
Single/ never married	63.3	248
Married/ living with partner	66.2	497
Divorced/ widowed/ separated	75.7	37
Religion		
Christian	65.9	756
Muslim	52.2	23
Others	100.0	5
Education status		
No formal education	55.6	18
Primary level	67.7	198
Secondary level	62.6	294
Certificate/ diploma level	68.3	205
University degree and above	71.6	74
Monthly income		
Ksh 0-10,000	57.7	267
Ksh 10,001-30,000	69.9	332
Ksh 30,001-50,000	70.8	48
Ksh 50,001 and above	77.0	61
Sector type		
Formal	66.9	417
Informal	64.9	373
Private sector	**65.9**	**790**

Lifetime Alcohol Use

The prevalence for lifetime alcohol use[2] among the private sector respondents was 65.9% compared to the public Sector, 57.90% (Table 4; NACADA, 2011). Both formal and informal sector key informants who identified alcohol as the most commonly abused substance among their employees, including the local brews like *Chang'aa* and *Busaa* particularly within the informal sector, echoed this finding. Many of the participants noted that it was difficult to detect the use of other drugs but alcohol was more evident in those who were using.

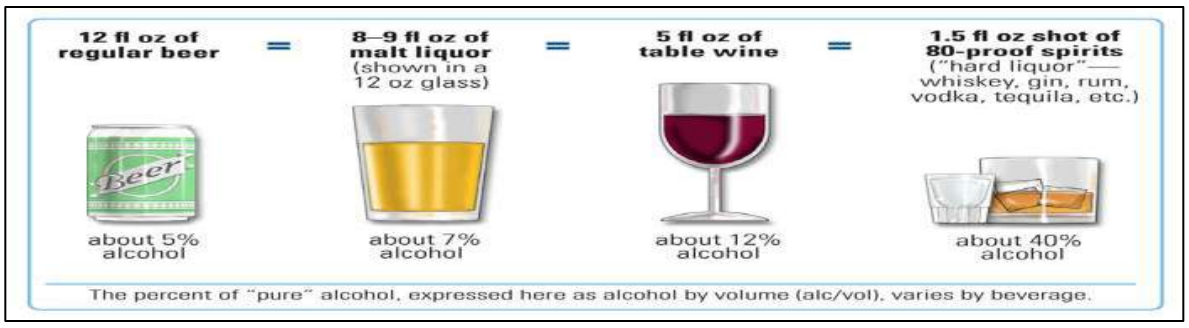
> "..there are times we will stumble upon one or two people who look like they have taken beer but mostly alcohol. I am aware about alcohol. Those other drugs I don't know" ***(Formal Sector Interview 12: Lines 12-14)***.
>
> "I am aware so to speak because, the number of employees who use this especially alcohol…" ***(Formal Sector Interview 10: Lines 6-7)***
> Interviewer: "Which drug is most commonly used?"
> Interviewee: "Alcohol" ***(Informal Sector Interview 3 – Translated from Swahili: Lines 5-6)***
>
> Interviewer: "what's the most common drug that is abused?"
> Interviewee: "it is alcohol, cigarettes, some are using even the drugs like cocaine.." (***Informal Sector Interview 5: Lines 13-14***)

The prevalence for lifetime use was lower among the informal sector employees (64.9%) compared to their formal sector counterparts (66.9%; Table 4).

Females in the private sector had lower lifetime prevalence (41.0%) compared to males (75.0%; Table 4). Lifetime use prevalence in the private sector was highest among private sector respondents aged 36 years and above (72.5%) followed by 25-35 year-olds (63.9%) and 18-24 year-olds (55.7%; Table 4).

---

[2] One drink is equivalent to a bottle of beer (0.35 L), a glass of wine (0.15L), or a drink with one shot of liquor. Note: A 1.2L beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks (NIAAA, 2014).



Key informants from both the formal and informal sectors also indicated that the majority of those affected by alcohol use were young adult males ranging in age from 25 to 45 years. While some acknowledged that some women were affected, most of the problems they had dealt with and some of the major consequences of use seemed to affect the males more.

> Interviewer: "So in your perception, who is the most affected by the drug use, is it the female employees or the male employees? And the age range? The youth or the older employees?"
> Interviewee: "It is the youth who are male" ***(Formal Sector Interview 8: Lines 12-14)***.

> Interviewer: "so who are the most affected, maybe in terms of say age?"
> Interviewee: "the young age, those coming into the industry are most affected because being exposed to this kind of environment, they get into it."
> Interviewer: "female or male?
> Interviewee: "male, female are a little bit better ***(Formal Sector Interview 17: Lines 18-22)***.

> "…young men who sometimes work for us are the ones mostly affected by drug use because these young men, someone comes in the morning, instead of working, they get into alcohol just sold out here……Now these young men, even now if you go you will find a long line of young men and we have tried to talk to the young men about this alcohol issue but it is difficult. Even now if you go around here, you will see young men, many of them drunk….***(Informal Sector Interview 8 – Translated from Swahili: Lines 9-18)***.

> "On the issue of alcohol, it is a lot more because there are young men, new generation who have gotten themselves into alcohol and that alcohol is destroying them" ….(***Informal Sector Interview 6 – Translated from Swahili: Lines 8-9***).

Divorced/widowed/separated private sector respondents had the highest lifetime use (75.7%) followed by married private sector respondents (66.2%) and single/never married respondents (63.3%; Table 4). Participants of other religious affiliation were more likely to have used alcohol in their life compared to Christians (65.9%) and Muslims (52.2%; Table 4). Private sector respondents with university degrees and above had the highest prevalence of lifetime use (71.6%) followed by private sector respondents with a diploma/certificate (68.3%), primary education (67.7%) and secondary education (62.6%; Table 4).

Private sector respondents with a monthly income of Ksh. 30,001-50,000 and Ksh. 50,001 and above were more likely to have used alcohol in their lifetime (77.0% and 70.8%, respectively) compared to those with an income of Ksh. 10,001-30,000 (69.9%) and Ksh. 0-10,000 (57.7%; Table 4).

5.2.2 12-Month/Annual Alcohol Use

Table 5: 12-month alcohol use

Variable	12-month alcohol use (%)	Total (n)
Gender		
Male	49.4	580
Female	17.7	210
Age		
18-24	34.4	131
25-35	43.5	388
36 and above	38.8	255
Marital status		
Single/ never married	37.5	248
Married/ living with partner	40.8	497
Divorced/ widowed/ separated	29.7	37
Religion		
Christian	40.7	756
Muslim	30.4	23
Others	80.0	5
Education status		
No formal education	11.1	18
Primary level	40.6	198
Secondary level	38.4	294
Certificate/ diploma level	42.2	205
University degree and above	56.8	74
Monthly income		
Ksh 0-10,000	36.5	267
Ksh 10,001-30,000	40.7	332
Ksh 30,001-50,000	45.8	48
Ksh 50,001 and above	47.5	61
Sector type		
Formal	43.0	417
Informal	38.7	373
Private sector	**41.0**	**790**

12-Month/Annual Alcohol Use

The prevalence for 12-month alcohol use among the private sector respondents was 41.0% (Table 5). The prevalence for 12-month use was lower among the informal sector employees (38.7%) compared to their formal sector counterparts (43.0%; Table 5).

Females in the private sector were less likely to have used alcohol in the past 12-months (17.7%) compared to their male counterparts (49.4%; Table 5). 12-month use prevalence in the private sector was highest among private sector respondents aged 25-35 years (43.5%), followed by participants aged 36 years and above (38.8%) and 18-24 year-old participants (34.4%; Table 5). Single/never married and married private sector respondents were more likely to have used alcohol in the past 12-months (43.1% and 40.8%, respectively) compared to divorced/widowed/separated respondents (29.7%; Table 5). Participants of other religious affiliation were more likely to have used alcohol in the past 12-months (80.0%) compared to Christians (40.7%) and Muslims (30.4%; Table 5). Private sector respondents with university degrees and above had the highest prevalence of 12-month use (56.8%) followed by private sector respondents with a diploma/certificate (42.2%), primary education (40.6%) and secondary education (38.4%; Table 5).

Private sector respondents with a monthly income of Ksh. 50,001 and above and Ksh. 30,001-50,000 were more likely to have used alcohol in the past 12-months (47.5% and 45.8%, respectively) compared to those with an income of Ksh. 10,001-30,000 (40.7%) and Ksh. 0-10,000 (36.5%; Table 5).

5.2.3 30-Day/Current Alcohol Use

Table 6: 30-day alcohol use

Variable	Current alcohol use (%)	Total (n)
Gender		
Male	44.4	580
Female	10.5	210
Age		
18-24	28.2	131
25-35	37.6	388
36 and above	34.5	255
Marital status		
Single/ never married	35.9	248
Married/ living with partner	35.8	497
Divorced/ widowed/ separated	27.0	37
Religion		
Christian	34.9	756
Muslim	30.4	23
Others	80.0	5
Education status		
No formal education	11.1	18
Primary level	35.0	198
Secondary level	34.4	294
Certificate/ diploma level	33.8	205
University degree and above	51.4	74
Monthly income		
Ksh 0-10,000	32.3	267
Ksh 10,001-30,000	34.9	332
Ksh 30,001-50,000	35.4	48
Ksh 50,001 and above	42.6	61
Sector type		
Formal	35.6	417
Informal	35.2	373
Private sector	**35.4**	**790**

30-Day/Current Alcohol Use

The prevalence for 30-day alcohol use among the private sector respondents was 35.4% (Table 6). The prevalence for 30-day use was slightly lower among the informal sector employees (35.2%) compared to their formal sector counterparts (35.6%; Table 6).

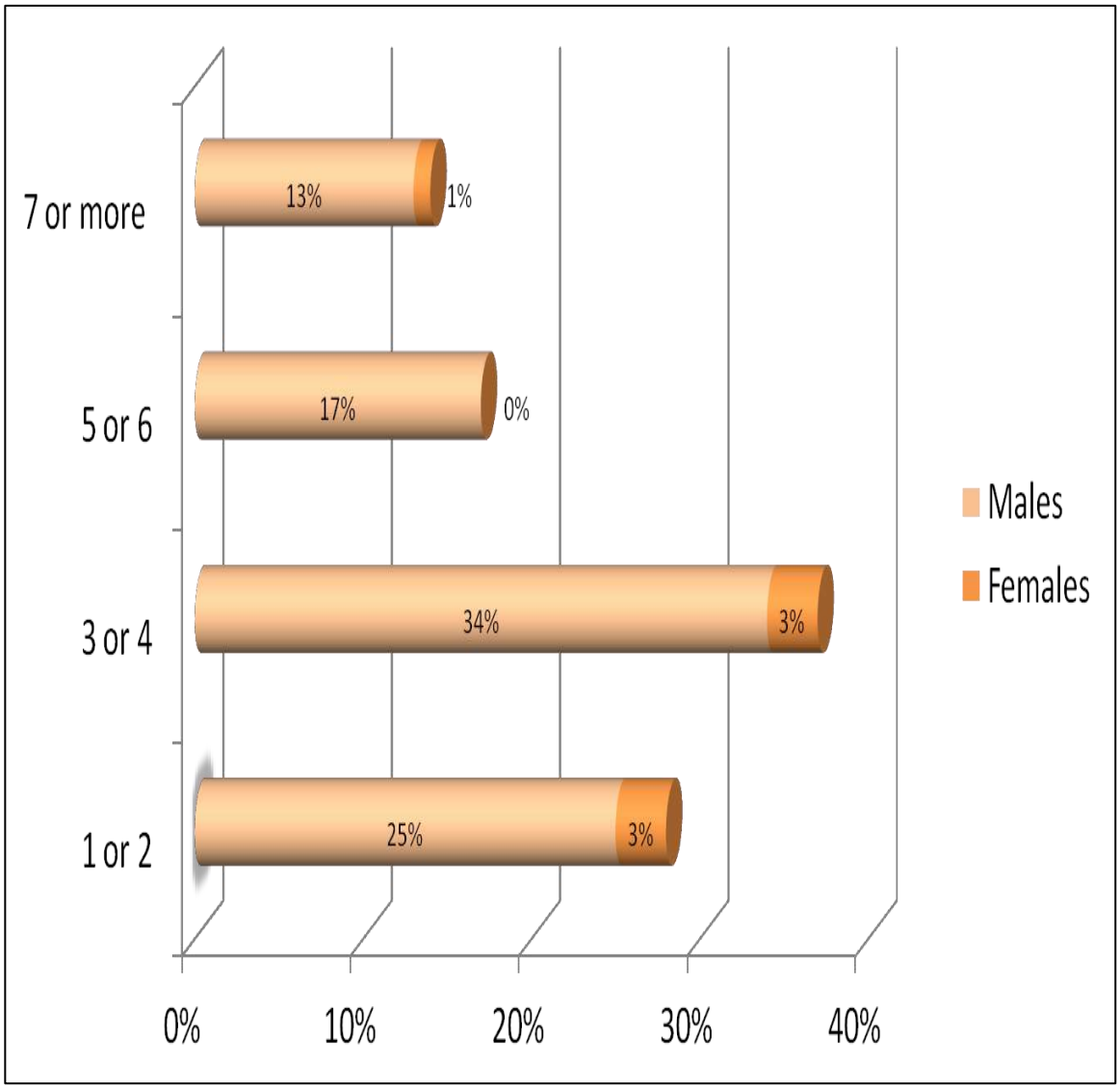
Females in the private sector were four times less likely to have used alcohol in the past 30-days (10.5%) compared to their male counterparts (44.4%; Table 6). 30-day use prevalence in the private sector was highest among private sector respondents aged 25-35 years (37.6%), followed by participants aged 36 years and above (34.5%) and 18-24 year-old participants (28.2%; Table 6). There was not a significant difference in 30-day alcohol use between single/never married and married private sector respondents (35.9% and 35.8%, respectively). Both groups were however more likely to have used alcohol in the past 30-days compared to divorced/widowed/separated respondents (27.0%; Table 6). Participants of other religious affiliation were more likely to have used alcohol in the past 30-days (80.0%) compared to Christians (34.9%) and Muslims (30.4%; Table 6). Private sector respondents with university degrees and above had the highest prevalence of 30-day use (51.4%) followed by private sector respondents with primary education (35.0%), secondary education (34.4%) and diploma/certificate (33.8%; Table 6).

Private sector respondents with a monthly income of Ksh. 50,001 and above and Ksh. 30,001-50,000 were more likely to have used alcohol in the past 30-days (42.6% and 35.4%, respectively) compared to those with an income of Ksh. 10,001-30,000 (34.9%) and Ksh. 0-10,000 (32.3%; Table 6).

5.2.4 Private Sector Alcoholic Drinks Consumed Per Day

On typical drinking days, both men and women tended to consume 4 or less drinks. Compared to females however, men were more likely to consume more than 5 drinks on a typical drinking day (Figure 2), an indicator of problem drinking or binge drinking.

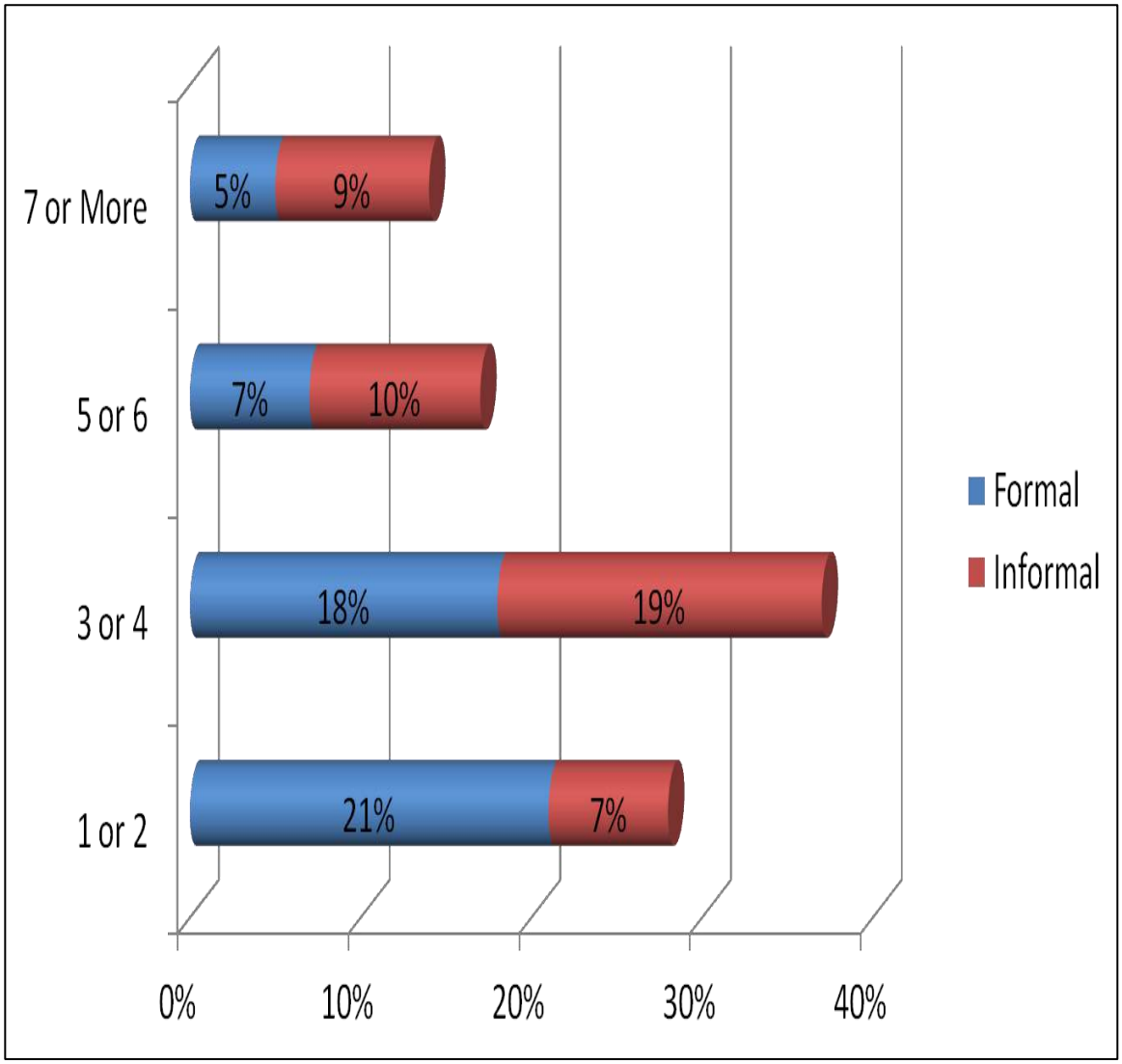
Figure 2: Private sector alcoholic drinks consumed per day (N=280)



Alcoholic Drinks Consumed Per Day By Sector

On typical drinking days, both formal and informal sector employees tended to consume 4 or less drinks. Compared to formal sector employees however, informal sector employees were more likely to consume more than 5 drinks on a typical drinking day (Figure 3), an indicator of problem drinking or binge drinking.

Figure 3: Alcoholic drinks consumed per day by sector (N=280)



5.2.5 Problem Drinking Indicators

To assess problem drinking, we employed a few questions to evaluate the extent of individual problems experienced by individuals in the private sector as a result of their alcohol use. These questions included attempts to quit drinking, realization of a need to cut down, anger at others for criticizing drinking patterns, need for a drink first thing in the morning to steady nerves, driving while under the influence and reporting to duty drunk. Table 7 provides a summary of the responses by gender for both the formal and informal sector respondents. For example 38% and 31% of males in the formal and informal sectors respectively felt they needed to cut down.

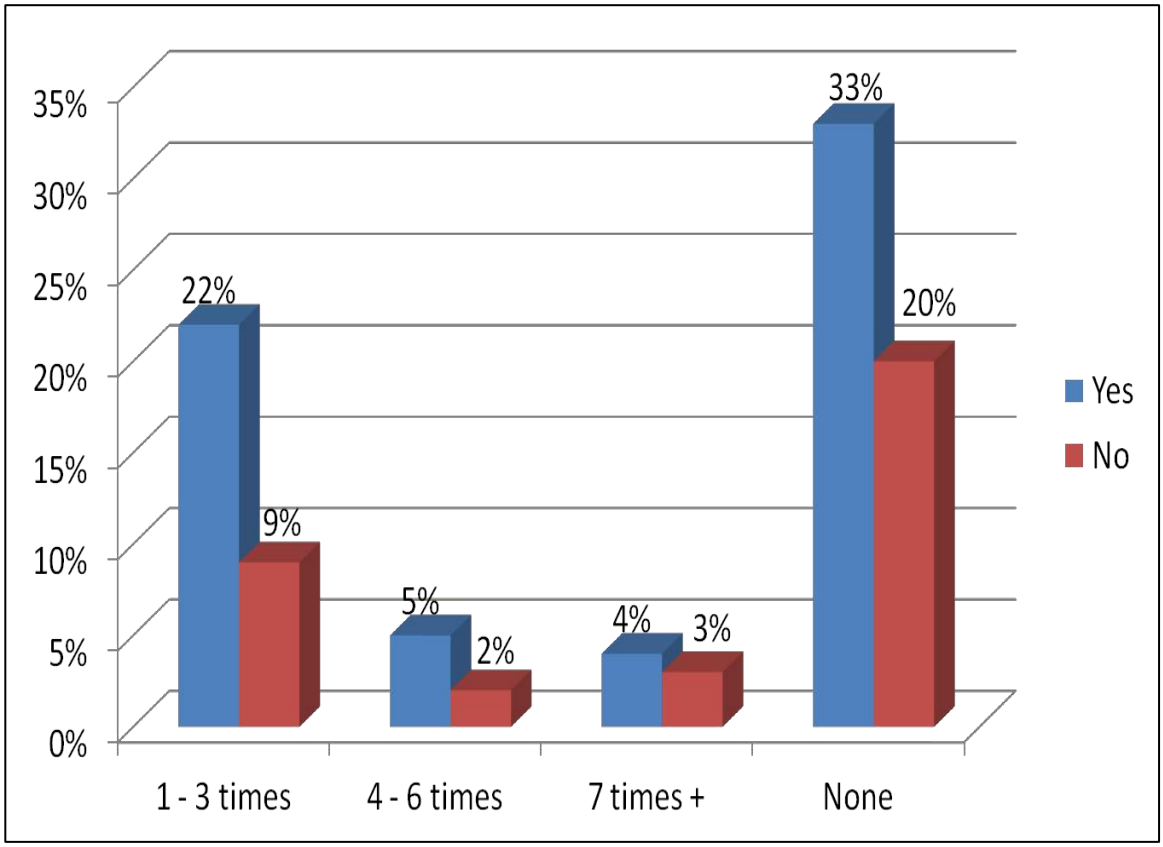
Table 7: Problem drinking indicators

		Problem Drinking Indicators							
		Formal Sector				**Informal Sector**			
		Males		Females		Males		Females	
Category	N	Yes	No	Yes	No	Yes	No	Yes	No
Have you ever tried to stop using alcohol?	279	31.50%	21.80%	27.30%	22.70%	26.50%	19.80%	31.80%	18.20%
Have you ever felt you needed to cut down on your drinking?	280	38.40%	15.10%	27.30%	22.70%	30.60%	16%	36.40%	13.60%
Have people annoyed you by criticizing your drinking?	280	17.40%	36.00%	9.10%	40.90%	26.40%	19.80%	22.70%	27.30%
Have you ever felt guilty about drinking?	790	12.10%	11.70%	1.90%	3.80%	11.70%	9.00%	3.30%	1.90%
Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?	280	14.30%	39.10%	13.60%	36.40%	20.50%	25.60%	18.20%	31.80%
During the past 12 months have you driven a vehicle while under the influence?	*****	*****	*****	*****	*****	*****	*****	*****	*****
Do you take any alcoholic drink or report on duty drunk?	790	4.10%	19.30%	0.00%	5.20%	8.80%	11.90%	1.00%	4.30%

5.2.6 Alcohol Use and Personal Health

Literature indicates that alcohol use can cause major health problems including anemia, high blood pressure, stroke, alcoholic hepatitis, different cancers, cirrhosis, depression, and seizures (NIAAA, 2010). While we can't infer a direct causal relationship, this data indicates an association between alcohol use and poor health manifested as absence from work due to illness and visits to health care facilities. Figure 4 indicates the relationship between lifetime alcohol use and past year absence from work. Figure 4 indicates that of the individuals that had used alcohol in their lifetime in the private sector, 22% (n=171) had been absent from work 1-3 times in the last year com- pared to 9% (n=67); 5% (n=37) had been absent from work 4-6 times in the last year compared to 2% (n=14); 5% (n=32) had been absent from work 7 or more times compared to 2% (n=13). While the numbers are small, they may indicate a need to engage primary care providers to identify those with alcohol-related problems early when they visit the hospitals for other illnesses so they can be referred to treatment if necessary.

Figure 4: Lifetime alcohol use and absence from work due to illness in the last year



Absence from work due to illness in the last year

Figure 5 indicates the relationship between lifetime alcohol use and visit to a health facility in the past 30 days. Of the individuals that had ever used alcohol in their lifetime 72 individuals (9%) had gone to a health facility 1-3 times for sickness in the past 30 days compared to 21 (3%) and 2 individuals had gone to a health facility more than 7 times for sickness in the past 30 days compared to those who had not used alcohol in their lifetime.

Figure 5: Lifetime alcohol use and visit to health facility in the past 30 days

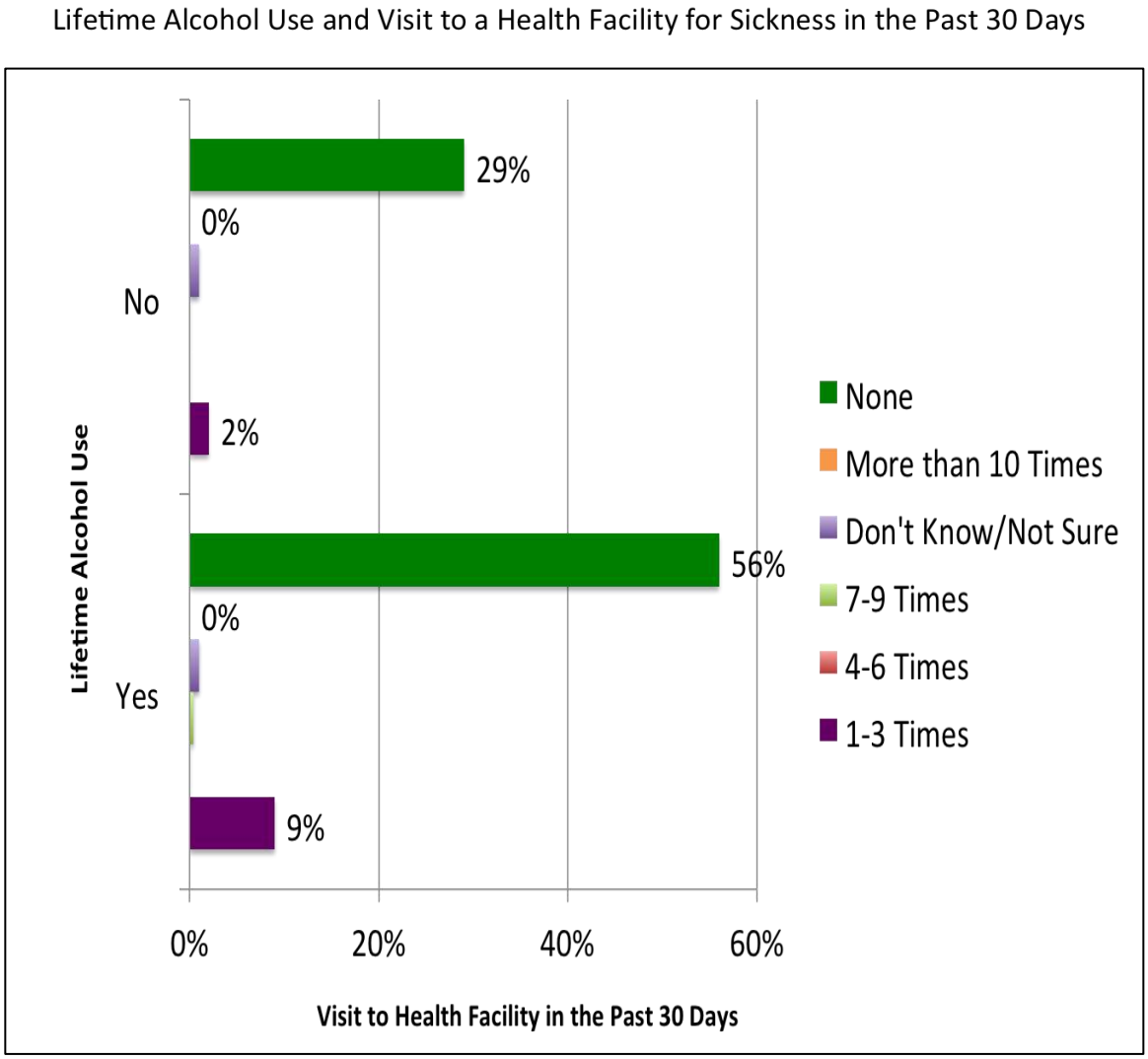


Figure 6 indicates the relationship between past 30-day alcohol use (current use) and absence from work in the past year due to illness. Of individuals that used alcohol in the past 30 days (current users) 84 (26%) individuals had been absent from work due to illness 1-3 times in the last year compared to 21 (3%).

Figure 6: Current alcohol use and absence from work due to illness in the last year

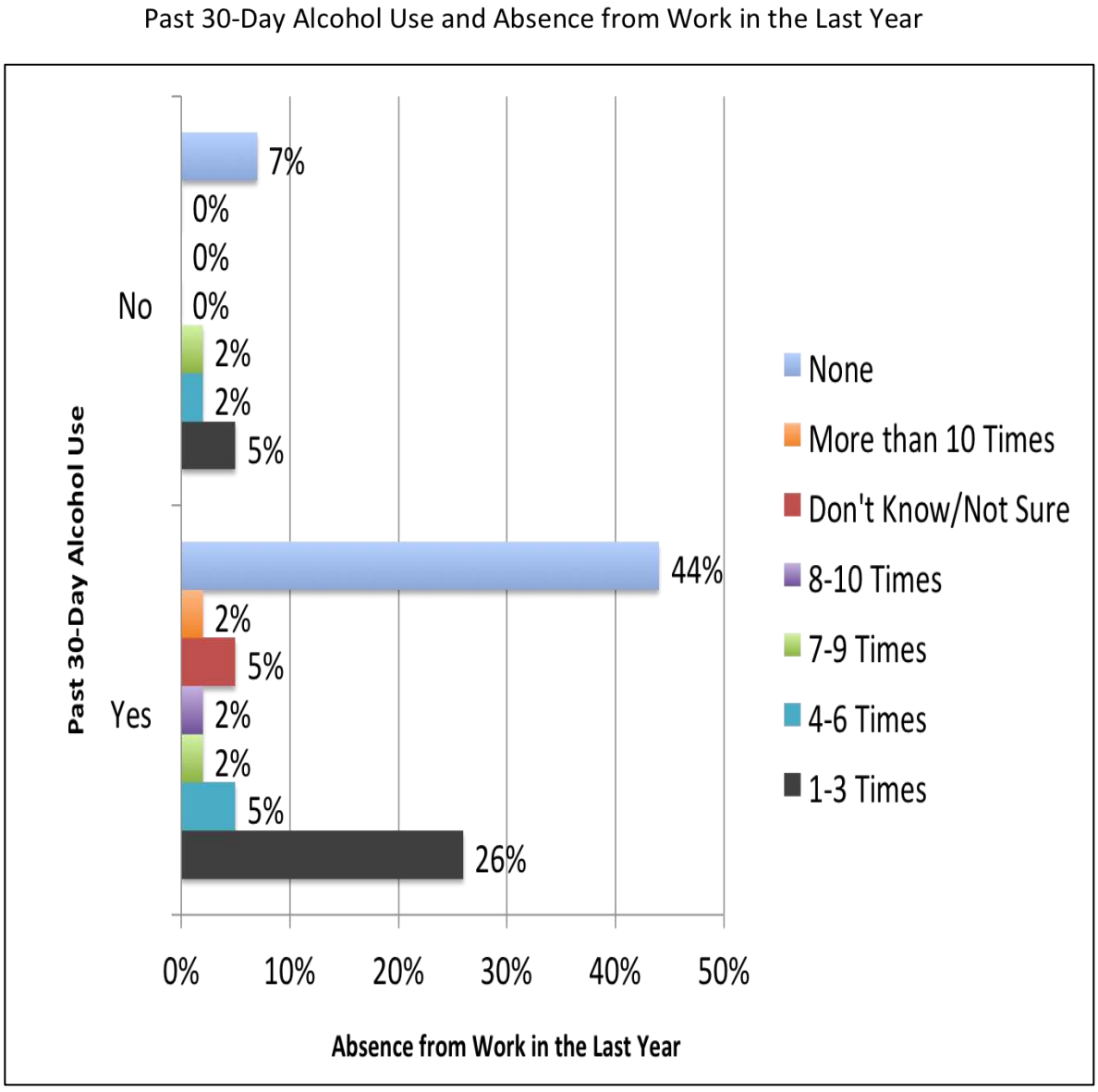
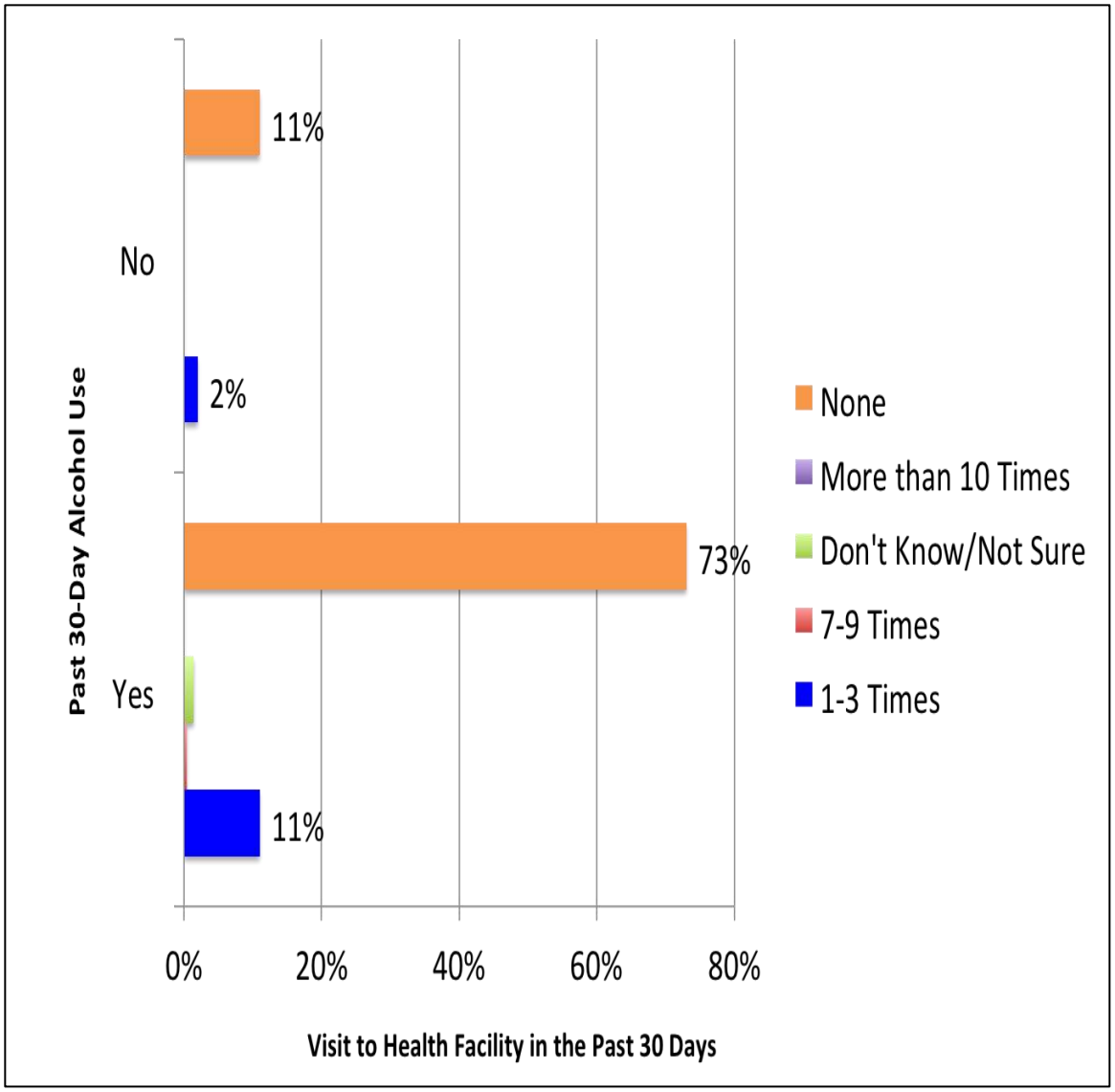


Figure 7 indicates the relationship between past 30-day alcohol use (current use) and visit to a health facility in the past 30 days. Of the individuals that had used alcohol in the past 30 days (current users), 11% (n=37) had gone to a health facility 1-3 times for sickness in the past 30 days compared to 2% (n=7) and 2 individuals had gone to a health facility more than 7 times for sickness in the past 30 days compared to none of those who had not used alcohol in their lifetime.

Figure 7: Current alcohol use and visit to a health facility for sickness in the past 30 days



5.2.7 Alcohol – Related Problems

Table 8 indicates further problems associated with alcohol use among private sector employees. The data indicates that the informal Jua Kali sector employees experienced more problems than their formal sector counterparts. For example, compared to their formal sector counterparts, informal sector employees experienced more conflicts with their colleagues and seniors (35.11%); more conflict with family members (48.09%), and lower concentration at work (38.93%; Table 8).

Table 8: Alcohol-related problems

Alcohol-Related Problems (N=280)				
	Formal Sector		Informal Sector	
	Yes	No	Yes	No
It brings conflicts with colleagues and seniors	11.4%	41.8%	16.4%	30.0%
It causes frequent health problems	9.3%	43.6%	8.9%	37.5%
It brings conflicts with family members	14.6%	38.6%	22.5%	23.9%
It leads to poor concentration at work	11.1%	42.1%	18.2%	27.5%
It leads to problems with security personnel	6.8%	45.4%	13.2%	33.2%

Key informant interview findings supported survey results on alcohol-related problems with both the formal sector and informal sector key informant interviewees agreeing that the impacts of ADA use were felt at three main levels, i.e. the individual, the family, and the workplace/community, which in turn affected the society and the economy as a whole. While neither the informal Jua kali leaders nor the formal sector interviewees could put an exact monetary figure on financial and social losses, they all agreed that there was a cost which manifested in things like having to replace workers and pay overtime, low productivity, violence at work, high insurance premiums, complaints from spouses and other factors as indicated on Table 9 on the next page.

Additionally, while the interviewees acknowledged that the impacts at each level were dire, they all agreed that the synergistic interaction among impacts at each of the three levels produced combined greater effects on the society and the economy than the sum of impacts at each of the levels alone (Figure 8).

Figure 8: Synergistic impacts of ADA use at the individual, family, workplace/community levels

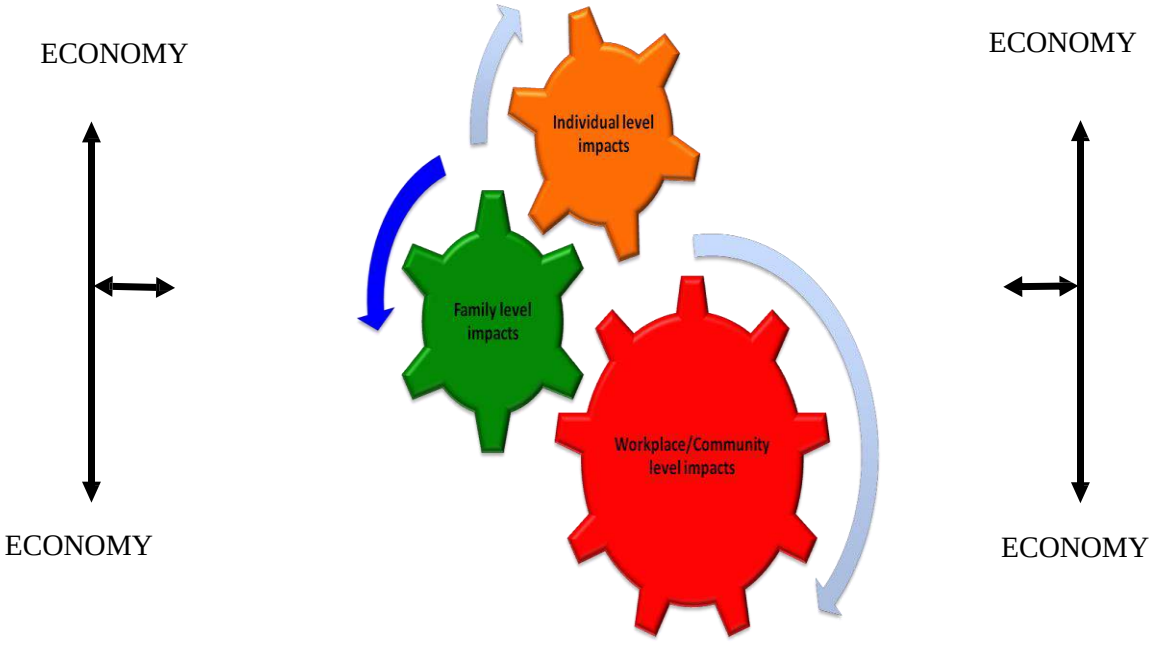
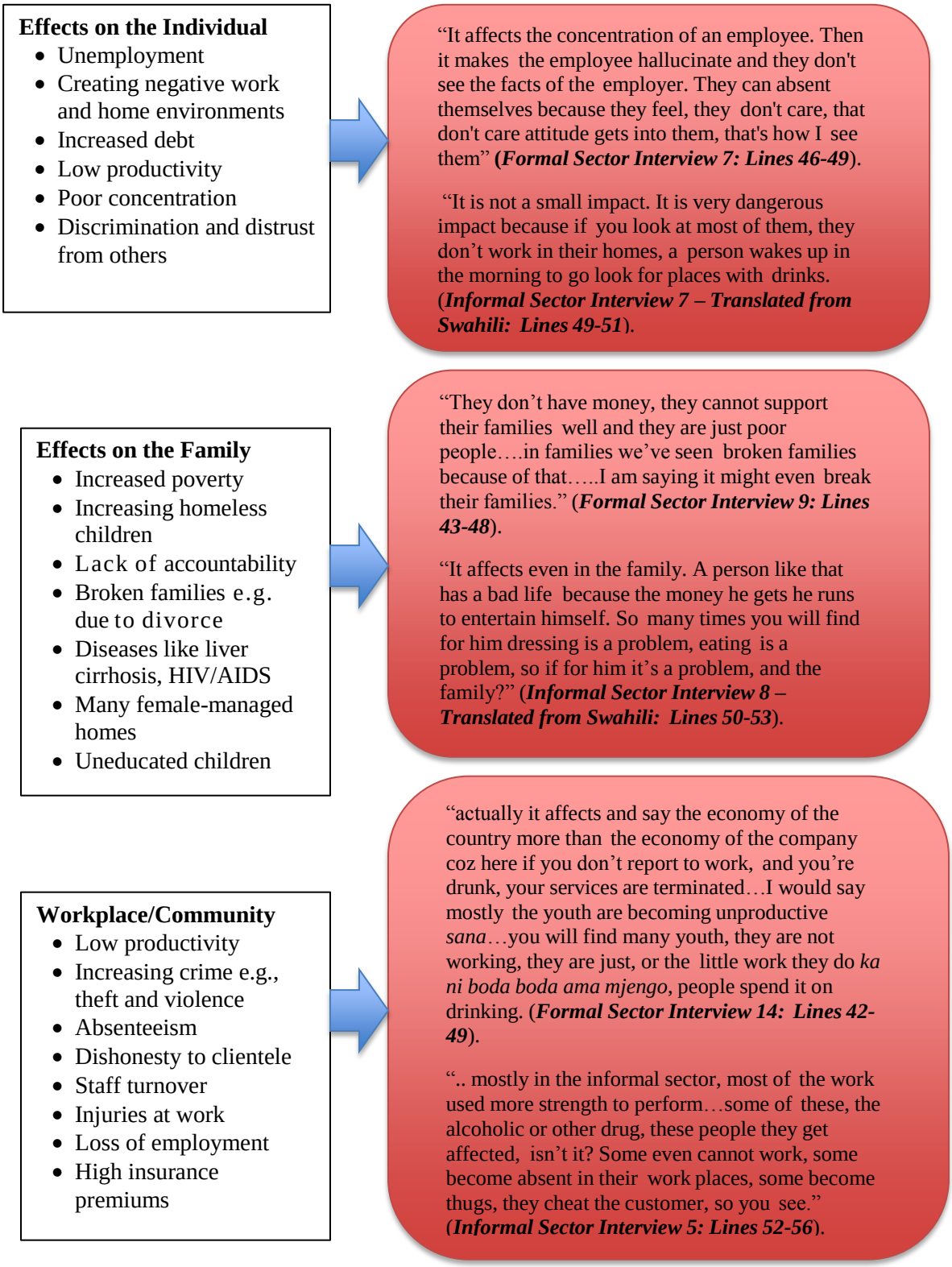


Table 9: Social and financial effects of ADA at the individual, family, workplace/community



5.2.8 Drinking Culture

Organizational cultures around the use of alcohol have serious implications for productivity and competitiveness (NACADA, 2011). Among both males and females in the formal and informal sectors, there was no apparent culture of drinking among workmates with a majority drinking with friends and relatives rather than with workmates. Though a small percentage, more male informal sector employees drank with workmates than their female counterparts and formal sector employees (18.33%; Table 10).

Table 10: Drinking culture among private sector employees

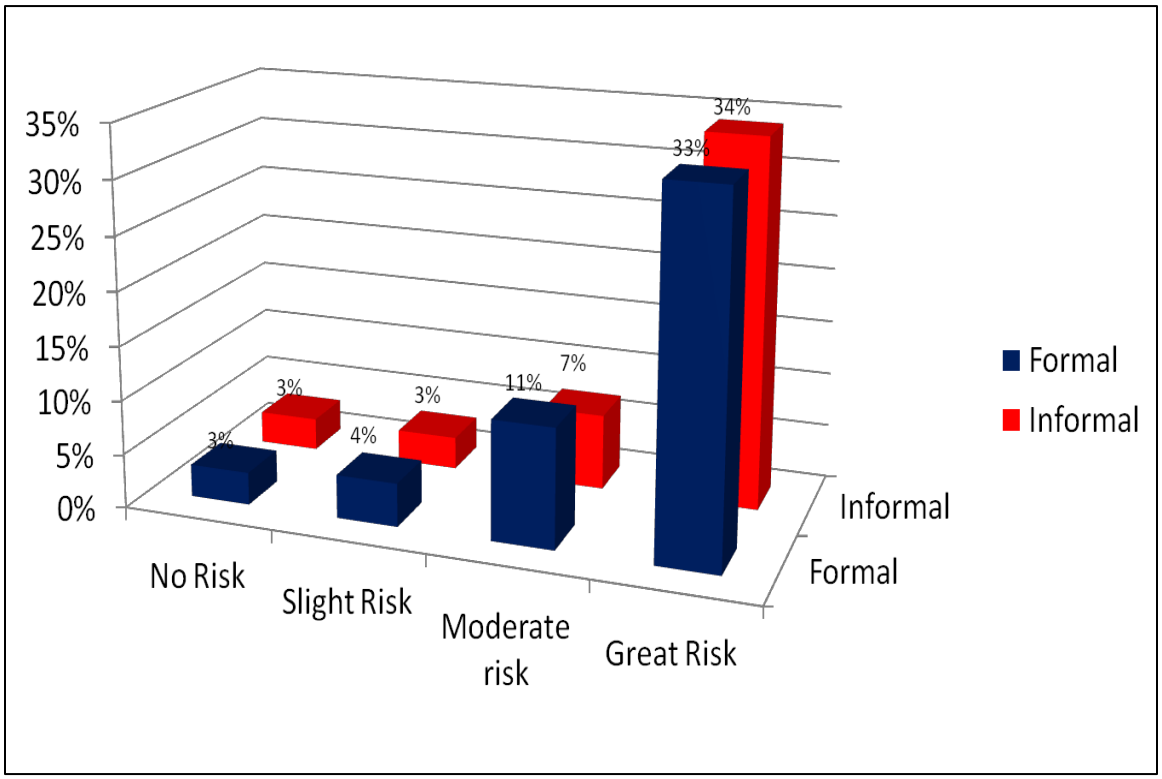
Drinking Culture Among Private Sector Employees (N=280)

	Formal Sector		Informal Sector	
	Males	Females	Males	Females
I drink alone	8.9%	4.5%	5.0%	4.5%
Spouse/Boyfriend/Girlfriend	2.7%	13.6%	2.3%	9.1%
Friends/Relatives who are not workmates	36.8%	27.3%	30.6%	27.3%
Workmates	3.1%	4.5%	8.5%	4.5%

5.2.9 Perception of Risk from Alcohol Use

Respondents were asked if there was any perceived physical or other risks associated with drinking five or more drinks of alcohol once or twice a week. Respondents from both the formal and informal sectors indicated that there was great risk (Figure 9).

Figure 9: Perception of risk from alcohol use (N=788)



5.3 Tobacco Use

5.3.1 Lifetime Tobacco Use

Table 11: Lifetime tobacco use

Variable	Lifetime cigarette/ pipe tobacco use (%)	Lifetime smokeless/ chewing tobacco use (%)	Total (n)
Gender			
Male	35.9	11.1	580
Female	7.2	2.4	210
Age			
18-24	19.1	10.7	131
25-35	26.4	7.3	388
36 and above	35.3	9.8	255
Marital status			
Single/ never married	27.5	9.3	248
Married/ living with partner	28.4	7.9	497
Divorced/ widowed/ separated	32.4	16.2	37
Religion			
Christian	27.3	8.2	756
Muslim	47.8	13.0	23
Others	60.0	20.0	5
Education status			
No formal education	22.2	22.2	18
Primary level	29.8	8.6	198
Secondary level	28.9	10.9	294
Certificate/ diploma level	26.0	5.4	205
University degree and above	29.7	6.8	74
Monthly income			
Ksh 0-10,000	27.3	9.4	267
Ksh 10,001-30,000	28.4	8.5	332
Ksh 30,001-50,000	31.3	12.5	48
Ksh 50,001 and above	36.1	4.9	61
Sector type			
Formal	24.8	7.5	417
Informal	32.2	10.2	373
Private sector	**28.3**	**8.8**	**790**

Lifetime Tobacco Use

Commercial tobacco use has been attributed to increased risk of heart disease, chronic obstructive pulmonary disease, strokes, and certain cancers e.g., lung, larynx, oral cavity, pharynx, pancreas and cervix (U.S Department of Health (2004). The average age for first time tobacco use was 18 for females and 19 for males in the private sector as a whole. Private sector respondents had a higher prevalence of lifetime cigarette/pipe use (28.3%; Table 11) compared to public sector employees (23%; NACADA, 2011). Informal sector employees were 7.4% more likely to have used cigarette/pipe in their life compared to formal sector employees (32.2% and 24.8%, respectively; Table 11). Females in the private sector had a lower lifetime prevalence of cigarette/pipe use (7.20%) compared to males (35.9%; Table 11). Lifetime cigarette/pipe use prevalence in the private sector was highest among respondents aged 36 years and above (35.3%) followed by 25-35 year-olds (26.4%) and 18-24 year-olds (19.1%; Table 11). Divorced/widowed/separated respondents had the highest lifetime cigarette/pipe use (32.4%) followed by married private sector respondents (28.4%) and single/never married respondents (27.5%; Table 11). Participants of other religious affiliation were more likely to have used cigarette/pipe in their life (60.0%) compared to Muslims (47.8%) and Christians (27.3%; Table 11). Private sector respondents with primary education and university degrees and above had the highest prevalence of lifetime cigarette/pipe use (29.8% and 29.7%, respectively) followed by private sector respondents with secondary education (28.9%), diploma/certificate (26.0%), and no formal education (22.2%; Table 11). Private sector respondents with a monthly income of Ksh. 50,001 and above and Ksh. 30,001-50,000 were more likely to have used cigarette/pipe in their lifetime (36.1% and 31.3%%, respectively) compared to those with an income of Ksh. 10,001-30,000 (28.4%) and Ksh. 0-10,000 (27.3%; Table 11). The lifetime prevalence of smokeless/chewing tobacco use in the private sector was 8.8% (Table 11). Informal sector employees were 2.7% more likely to have used smokeless/chewing tobacco in their life compared to formal sector employees (10.2% and 7.5%, respectively; Table 11). Females in the private sector had a lower lifetime prevalence of smokeless/chewing tobacco use (2.4%) compared to males (11.1%; Table 11). Lifetime smokeless/chewing tobacco use prevalence in the private sector was highest among respondents aged 18-24 years (10.7%) and 36 years & above (9.8%) followed by 25-35 year-olds (7.3%; Table 11). Divorced/widowed/separated respondents had the highest lifetime smokeless/chewing tobacco use (16.2%) followed by single/never-married respondents (9.3%) and married respondents (7.9%; Table 11). Participants of other religious affiliation were more likely to have used smokeless/chewing tobacco in their life (20.0%) compared to Muslims (13.0%) and Christians (8.2%; Table 11). Respondents with no formal education had the highest prevalence of lifetime smokeless/chewing tobacco use (22.2%) followed by respondents with secondary education (10.9%), primary education (8.6%), university degrees and above (6.8%) and diploma/certificate (5.4%). Respondents with a monthly income of Ksh. 30,001-50,000 had the highest prevalence of lifetime smokeless/chewing tobacco use (12.5%) compared to those with an income of Ksh. 0-10,000 (9.4%), Ksh.10,001-30,000 (8.5%) and Ksh.50,001 and above (4.9%; Table 11).

5.3.2 12-Month/Annual Tobacco Use

Table 12: 12-month tobacco use

Variable	12-month cigarette/ pipe tobacco use (%)	12-month smokeless/ chewing tobacco use (%)	Total (n)
Gender			
Male	18.8	5.2	580
Female	1.9	1.0	210
Age			
18-24	9.2	5.3	131
25-35	13.4	4.4	388
36 and above	17.6	2.7	255
Marital status			
Single/ never married	12.5	4.0	248
Married/ living with partner	14.5	3.6	497
Divorced/ widowed/ separated	21.6	10.8	37
Religion			
Christian	13.8	3.3	756
Muslim	26.1	13.0	23
Others	20.0	20.0	5
Education status			
No formal education	5.6	16.7	18
Primary level	16.7	3.0	198
Secondary level	17.0	5.4	294
Certificate/ diploma level	10.7	1.5	205
University degree and above	9.5	5.4	74
Monthly income			
Ksh 0-10,000	14.6	2.6	267
Ksh 10,001-30,000	13.9	4.5	332
Ksh 30,001-50,000	20.8	8.3	48
Ksh 50,001 and above	13.1	3.3	61
Sector type			
Formal	11.8	3.1	417
Informal	17.2	5.1	373
Private sector	**14.3**	**4.1**	**790**

12-Month/Annual Tobacco Use

Informal sector employees are more likely to have used cigarette/pipe in the past 12-months (17.2%) compared to the private sector as a whole (14.3%) and formal sector employees (11.8%; Table 12). Females in the private sector had a lower 12-month prevalence of cigarette/pipe use (1.9%) compared to males (18.8%; Table 12). 12-month cigarette/pipe use prevalence in the private sector was highest among private sector respondents aged 36 years and above (17.6%) followed by 25-35 year-olds (13.4%) and 18-24 year-olds (9.2%; Table 12). Divorced/widowed/separated private sector respondents had the highest 12-month cigarette/pipe use (21.6%) compared to married private sector respondents (14.5%) and single/never married respondents (12.5%; Table 12). Participants that indicated they were Muslim were more likely to have used cigarette/pipe in the past 12-months (26.1%) compared to those of other religious affiliation (20.0%) and Christians (13.8%; Table 12). Private sector respondents with secondary education and primary education had the highest prevalence of 12-month cigarette/pipe use (17.0% and 16.7%, respectively) compared to private sector respondents with diploma/certificate (10.7%), university degrees and above (9.5%) and no formal education (5.6%; Table 12). Private sector respondents with a monthly income of Ksh. 30,001-50,000 were more likely to have used cigarette/pipe in the past 12-months (20.8%) compared to those with an income of Ksh. 0-10,000 (14.6%), Ksh. 10,001-30,000 (13.9%) and Ksh. 50,001 and above (13.1%; Table 12).

The 12-month prevalence of smokeless/chewing tobacco use in the private sector was highest among informal sector employees (5.1%) compared to the private sector as a whole (4.1%) and the formal sector (3.1%; Table 12). Females in the private sector had a lower 12-month prevalence of smokeless/chewing tobacco use (1.0%) compared to males (5.2%; Table 12). 12-month smokeless/chewing tobacco use prevalence in the private sector was highest among respondents aged 18-24 years (5.3%) and 25-35 year-olds (4.4%) followed by 36 years and above (2.7%; Table 12). Divorced/widowed/separated private sector respondents had the highest 12-month smokeless/chewing tobacco use (10.8%) followed by single/never-married respondents (4.0%) and married private sector respondents (3.6%; Table 12). Participants of other religious affiliation were more likely to have used smokeless/chewing tobacco in the past 12-months (20.0%) compared to Muslims (13.0%) and Christians (3.3%; Table 12). Private sector respondents with no formal education had the highest prevalence of 12-month smokeless/chewing tobacco use (16.7%) followed by respondents with secondary education (5.4%) and university degrees and above (5.4%), primary education (3.0%), and diploma/certificate (1.5%; Table 12). Private sector respondents with a monthly income of Ksh. 30,001-50,000 had the highest prevalence of 12-month smokeless/chewing tobacco use (8.3%) compared to those with an income of Ksh. 10,001-30,000 (4.5%), Ksh. 50,001 and above (3.3%) and Ksh. 0-10,000 (2.6%; Table 12).

5.3.4 30-Day/Current Tobacco Use

Table 13: 30-day tobacco use

Variable	Current cigarette/ pipe tobacco use (%)	Current smokeless/ chewing tobacco use (%)	Total (n)
Gender			
Male	18.3	4.0	580
Female	1.4	1.0	210
Age			
18-24	8.4	4.6	131
25-35	12.9	3.1	388
36 and above	17.6	2.4	255
Marital status			
Single/ never married	12.5	2.8	248
Married/ living with partner	13.7	2.8	497
Divorced/ widowed/ separated	21.6	10.8	37
Religion			
Christian	13.2	2.4	756
Muslim	26.1	13.0	23
Others	20.0	20.0	5
Education status			
No formal education	5.6	16.7	18
Primary level	16.7	2.5	198
Secondary level	16.7	3.4	294
Certificate/ diploma level	9.8	1.5	205
University degree and above	8.1	5.4	74
Monthly income			
Ksh 0-10,000	14.6	1.9	267
Ksh 10,001-30,000	13.6	3.3	332
Ksh 30,001-50,000	20.8	8.3	48
Ksh 50,001 and above	13.1	3.3	61
Sector type			
Formal	11.3	2.4	417
Informal	11.6	4.0	373
Private sector	**13.8**	**3.2**	**790**

30-Day/Current Tobacco Use

The prevalence of 30-day cigarette/pipe was 13.8% in the private sector, 11.6% in the informal sector and 11.3% in the formal sector. Males in the private sector are 16.9% times more likely to have used cigarette/pipe in the past 30 days compared to females (1.4%; Table 13). 30-day cigarette/pipe use prevalence in the private sector was highest among private sector respondents aged 36 years and above (17.6%) followed by 25-35 year-olds (12.9%) and 18-24 year-olds (8.4%; Table 13). Divorced/widowed/separated private sector respondents had the highest 30-day cigarette/pipe use (21.6%) compared to married private sector respondents (12.9%) and single/never married respondents (12.5%; Table 13). Participants that indicated they were Muslim were more likely to have used cigarette/pipe in the past 30-days (26.1%) compared to those of other religious affiliation (20.0%) and Christians (13.2%; Table 13). Private sector respondents with secondary education and primary education had the highest prevalence of 30-day cigarette/pipe use (16.7% and 16.7%, respectively) compared to private sector respondents with diploma/certificate (9.8%), university degrees and above (8.1%) and no formal education (5.6%; Table 13). Private sector respondents with a monthly income of Ksh. 30,001- 50,000 were more likely to have used cigarette/pipe in the past 30-days (20.8%) compared to those with an income of Ksh. 0-10,000 (14.6%), Ksh. 10,001-30,000 (13.6%) and Ksh. 50,001 and above (13.1%; Table 13).

The 30-day prevalence of smokeless/chewing tobacco use in the private sector was highest among informal sector employees (4.0%) compared to the private sector as a whole (3.2%) and the formal sector (2.4%; Table 13). Females in the private sector were less likely to have used smokeless/chewing tobacco (1.0%) compared to their male counterparts (4.0%; Table 13). 30-day smokeless/chewing tobacco use prevalence in the private sector was highest among respondents aged 18-24 years (4.6%) and 25-35 year-olds (3.1%) followed by 36 years and above (2.4%; Table 13). Divorced/widowed/separated private sector respondents had the highest 30-day smokeless/chewing tobacco use (10.8%) followed by single/never-married respondents and married private sector respondents (each at 2.8%; Table 13). Participants of other religious affiliation were more likely to have used smokeless/chewing tobacco in the past 30 days (20.0%) compared to Muslims (13.0%) and Christians (2.4%; Table 13). Private sector respondents with no formal education had the highest prevalence of 30-day smokeless/chewing tobacco use (16.7%) followed by respondents with university degrees and above (5.4%), secondary education (3.4%), primary education (2.5%), and diploma/certificate (1.5%; Table 13). Private sector respondents with a monthly income of Ksh. 30,001-50,000 had the highest prevalence of 30-day smokeless/chewing tobacco use (8.3%) compared to those with an income of Ksh. 10,001-30,000 (3.3%), Ksh. 50,001 and above (3.3%) and Ksh. 0-10,000 (1.9%; Table 13).

5.4 *Khat*/ Miraa/ Muguuka Use

5.4.1 Lifetime *Khat*/ Miraa/ Muguuka Use

Table 14: Lifetime *Khat*/ Miraa/ Muguuka use

Variable	Lifetime khat/ miraa use (%)	Total (n)
Gender		
Male	31.7	580
Female	7.7	210
Age		
18-24	22.9	131
25-35	28.7	388
36 and above	20.8	255
Marital status		
Single/ never married	30.0	248
Married/ living with partner	23.1	497
Divorced/ widowed/ separated	24.3	37
Religion		
Christian	24.0	756
Muslim	52.2	23
Others	60.0	5
Education status		
No formal education	16.7	18
Primary level	26.3	198
Secondary level	27.6	294
Certificate/ diploma level	21.1	205
University degree and above	28.4	74
Monthly income		
Ksh 0-10,000	25.8	267
Ksh 10,001-30,000	25.1	332
Ksh 30,001-50,000	29.2	48
Ksh 50,001 and above	24.6	61
Sector type		
Formal	20.7	417
Informal	30.6	373
Private sector	**25.3**	**790**

Lifetime *Khat*/Miraa/Muguuka Use

Informal sector employees were more likely to have used *khat/miraa/muguuka* in their life (30.6%) compared to private sector employees as a whole (25.3%) and formal sector employees (20.7%; Table 14).

Females in the private sector had a lower lifetime prevalence of *khat*/miraa/*muguuka* (7.7%) compared to males (31.7%; Table 14). Lifetime *khat*/miraa/*muguuka* use prevalence in the private sector was highest among private sector respondents aged 25-35 years (28.7%) followed by 18-24 year-olds (22.9%) and 36 years and above (20.8%; Table 14).

Single/never married private sector respondents were more likely to have used *khat/ miraa/muguuka* in their lifetime (30.0%) compared to divorced/widowed/separated private sector respondents (24.3%) and married respondents (23.1%; Table 14). Participants of other religious affiliation were more likely to have used *khat*/*miraa*/ *muguuka* in their life (60.0%) compared to Muslims (52.2%) and Christians (24.0%; Table 14).

Private sector respondents with university degrees and above and secondary education had the highest prevalence of lifetime *khat/miraa/muguuka* use (28.4% and 27.6%, respectively) followed by private sector respondents with primary education (26.3%), diploma/certificate (21.1%), and no formal education (16.7%; Table 14). Private sector respondents with a monthly income of Ksh. 30,001-50,000, Ksh. 0-10,000 and Ksh. 10,001-30,000 were more likely to have used *khat/miraa/muguuka* in their lifetime (29.2%, 25.8%, and 25.1%, respectively) compared those who earned Ksh. 50,001 and above and (24.6%; Table 14).

5.4.2 12-Month (Annual) *Khat*/ Miraa/ Muguuka Use

Table 15: 12-month *Khat*/ Miraa/ Muguuka use

Variable	12-month khat/miraa use (%)	Total (n)
Gender		
Male	17.8	580
Female	2.9	210
Age		
18-24	15.3	131
25-35	16.5	388
36 and above	8.2	255
Marital status		
Single/ never married	19.0	248
Married/ living with partner	11.1	497
Divorced/ widowed/ separated	13.5	37
Religion		
Christian	12.4	756
Muslim	34.8	23
Others	60.0	5
Education status		
No formal education	11.1	18
Primary level	17.7	198
Secondary level	16.0	294
Certificate/ diploma level	6.8	205
University degree and above	4.9	74
Monthly income		
Ksh 0-10,000	16.5	267
Ksh 10,001-30,000	15.1	332
Ksh 30,001-50,000	10.4	48
Ksh 50,001 and above	8.2	61
Sector type		
Formal	10.1	417
Informal	18.0	373
Private sector	**13.8**	**790**

12-Month (Annual) *Khat/Miraa/Muguuka* Use

Informal sector employees are more likely to have used *khat/miraa/muguuka* in the past 12-months (18.0%) compared to the private sector as a whole (13.8%) and formal sector employees (10.1%; Table 15). Females in the private sector had a lower 12-month prevalence of *khat/miraa/muguuka* use (2.9%) compared to males (17.8%; Table 15).

12-month *khat/miraa/muguuka* use prevalence in the private sector was highest among private sector respondents aged 25-35 years and 18-24 years (16.5% and 15.3%, respectively) compared to 8.2% among respondents 36 years and above (Table 15). Single/never married respondents were more likely to have used *khat/miraa/muguuka* (19.0%) compared to divorced/widowed/separated private sector respondents (13.5%) and married private sector respondents (11.1%; Table 15).

Participants of other religious affiliation were almost twice as likely to have used *khat/miraa/muguuka* in the past 12-months (60%) compared to Muslims (34.8%) and almost 5 times compared to Christians (12.4%; Table 15). Private sector respondents with primary education and secondary education had the highest prevalence of 12-month *khat/miraa/muguuka* use (17.7% and 16.0%, respectively) compared to private sector respondents with university degrees and above (14.9%), no formal education (11.1%), and diploma/certificate (6.8%; Table 15).

Private sector respondents with a monthly income of Ksh. 0-10,000 were more likely to have used *khat/miraa/muguuka* in the past 12-months (16.5%) compared to those with an income of Ksh. 10,001-30,000 (15.1%), Ksh. 30,001-50,000 (10.4%), and Ksh. 50,001 and above (8.2%; Table 15).

5.4.3 30-Day (Current) *Khat*/ Miraa/ Muguuka Use

Table 16: 30-day *Khat*/ Miraa/ Muguuka use

Variable	Current khat/ miraa use (%)	Total (n)
Gender		
Male	14.0	580
Female	2.4	210
Age		
18-24	13.0	131
25-35	12.6	388
36 and above	6.7	255
Marital status		
Single/ never married	15.3	248
Married/ living with partner	8.5	497
Divorced/ widowed/ separated	13.5	37
Religion		
Christian	9.7	756
Muslim	34.8	23
Others	40.0	5
Education status		
No formal education	11.1	18
Primary level	15.7	198
Secondary level	12.6	294
Certificate/ diploma level	4.4	205
University degree and above	9.5	74
Monthly income		
Ksh 0-10,000	13.5	267
Ksh 10,001-30,000	12.0	332
Ksh 30,001-50,000	8.3	48
Ksh 50,001 and above	4.9	61
Sector type		
Formal	7.2	417
Informal	15.0	373
Private sector	**10.9**	**790**

30-Day (Current) *Khat/Miraa/Muguuka* Use

Informal sector employees are more likely to have used *khat/miraa/muguuka* in the past 30 days (15.0%) com- pared to the private sector as a whole (10.9%) and formal sector employees (7.2%; Table 16). Females in the private sector were less likely to have used *khat/miraa/muguuka* in the past 30 days (2.4%) compared to males (14.0%; Table 16).

30-day *khat/miraa/muguuka* use prevalence in the private sector was highest among private sector respondents aged 18-24 years and 25-35 years (13.0% and 12.6%, respectively) compared to 6.7% among respondents 36 years and above (Table 16). Single/never married respondents were more likely to have used *khat/miraa/muguuka* in the past 30 days (15.3%) compared to Divorced/widowed/separated private sector respondents (13.5%) and married private sector respondents (8.5%; Table 16).

Participants of other religious affiliation were more likely to have used *khat/miraa/ muguuka* in the past 30- days (40%) compared to Muslims (34.8%) and Christians (9.7%; Table 16). Private sector respondents with primary education and secondary education had the highest prevalence of 30-day *khat/miraa/muguuka* use (15.7% and 12.6%, respectively) compared to private sector respondents with no formal education (11.1%), university degrees and above (9.5%), and diploma/certificate (4.4%; Table 16).

Private sector respondents with a monthly income of Ksh. 0-10,000 were more likely to have used *khat/miraa/muguuka* in the past 30 days (13.5%) compared to those with an income of Ksh. 10,001-30,000 (12.0%), Ksh. 30,001-50,000 (8.3%), and Ksh. 50,001 and above (4.9%; Table 16).

5.5 Bhang/ Marijuana Use

5.5.1 Lifetime Bhang/ Marijuana Use

Table 17: Lifetime bhang/marijuana use

Variable	Lifetime bhang use (%)	Total (n)
Gender		
Male	18.1	580
Female	5.3	210
Age		
18-24	15.3	131
25-35	13.7	388
36 and above	13.7	255
Marital status		
Single/ never married	18.6	248
Married/ living with partner	13.1	497
Divorced/ widowed/ separated	8.1	37
Religion		
Christian	13.8	756
Muslim	21.7	23
Others	40.0	5
Education status		
No formal education	16.7	18
Primary level	13.1	198
Secondary level	16.1	294
Certificate/ diploma level	10.3	205
University degree and above	25.7	74
Monthly income		
Ksh 0-10,000	18.0	267
Ksh 10,001-30,000	12.1	332
Ksh 30,001-50,000	10.4	48
Ksh 50,001 and above	13.1	61
Sector type		
Formal	5.4	417
Informal	9.3	373
Private sector	**14.7**	**790**

Lifetime Bhang/ Marijuana Use

The prevalence of lifetime bhang/marijuana use among private sector employees was 14.7%. When delineated by sector, informal sector employees were more likely to have used bhang/marijuana in their life (9.3%) compared to formal sector employees (5.4%; Table 17).

Females in the private sector had a lower lifetime prevalence of bhang/marijuana use (5.3%) compared to males (18.1%; Table 17). Lifetime bhang/marijuana use prevalence in the private sector was highest among private sector respondents aged 18-24 years (15.3%). There was no difference in lifetime use of bhang/marijuana between 25-35 year-olds and 36 years and above (each 13.7%; Table 17).

Single/never married private sector respondents were more likely to have used bhang/marijuana in their life-time (18.6%) compared to married respondents and divorced/widowed/separated private sector respondents (13.1% and 8.1%, respectively; Table 17). Participants of other religious affiliation were more likely to have used bhang/marijuana in their life (40.0%) compared to Muslims (21.7%) and Christians (13.8%; Table 17).

Private sector respondents with university degrees and above had the highest prevalence of lifetime bhang/marijuana use (25.7%). The prevalence of lifetime bhang/marijuana use among participants with no formal education, secondary education, primary education and diploma/certificate was 16.7%, 16.1%, 13.1% and 10.3%, respectively (Table 17). Private sector respondents with a monthly income of Ksh. 0-10,000 were more likely to have used bhang/marijuana in their life (18.0%) compared to private sector respondents with an in- come of Ksh. 50,001 and above, Ksh. 10,001-30,000 and Ksh. 30,001-50,000 (13.1%, 12.1%, and 10.4%, respectively; Table 17).

5.5.2 12-Month (Annual) Bhang/ Marijuana Use

Table 18: 12-month bhang/ marijuana use

Variable	12-month bhang use (%)	Total (n)
Gender		
Male	6.4	580
Female	2.4	210
Age		
18-24	6.1	131
25-35	6.7	388
36 and above	1.2	255
Marital status		
Single/ never married	7.7	248
Married/ living with partner	4.0	497
Divorced/ widowed/ separated	5.4	37
Religion		
Christian	4.8	756
Muslim	8.7	23
Others	20.0	5
Education status		
No formal education	5.6	18
Primary level	5.6	198
Secondary level	6.5	294
Certificate/ diploma level	2.9	205
University degree and above	6.8	74
Monthly income		
Ksh 0-10,000	9.0	267
Ksh 10,001-30,000	3.0	332
Ksh 30,001-50,000	2.1	48
Ksh 50,001 and above	3.3	61
Sector type		
Formal	2.4	417
Informal	8.6	373
Private sector	**5.3**	**790**

12-Month (Annual) Bhang/Marijuana Use

Informal sector employees are more likely to have used bhang/marijuana in the past 12-months (8.6%) compared to the private sector as a whole (5.3%) and formal sector employees (2.4%; Table 18). Females in the private sector had a lower 12-month prevalence of bhang/marijuana use (2.4%) compared to males (6.4%; Table 18).

12-month bhang/marijuana use prevalence in the private sector was highest among private sector respondents aged 25-35 years and 18-24 years (6.7% and 6.1%, respectively) compared to 1.2% among respondents 36 years and above (Table 18). Single/never married respondents were more likely to have used bhang/marijuana (7.7%) compared to Divorced/widowed/separated private sector respondents (5.4%) and married private sector respondents (4.0%; Table 18).

Participants of other religious affiliation were almost twice as likely to have used bhang/marijuana in the past 12-months (20%) compared to Muslims (8.7%) and almost 4 times compared to Christians (4.8%; Table 18). Private sector respondents with university degrees and above and secondary education had the highest prevalence of 12-month bhang/marijuana use (6.8% and 6.5%, respectively) followed by private sector respondents with primary education (5.6%), no formal education (5.6%), and diploma/certificate (2.9%; Table 18).

Private sector respondents with a monthly income of Ksh. 0-10,000 were more likely to have used bhang/marijuana in the past 12-months (9.0%) compared to those with an income of Ksh. 50,001 and above (3.3%), Ksh. 10,001-30,000 (3.0%), Ksh. 30,001-50,000 (2.1%; Table 18).

5.5.3 30-Day (Current) Bhang/ Marijuana Use

Table 19: 30-day bhang/ marijuana use

Variable	Current bhang use (%)	Total (n)
Gender		
Male	5.2	580
Female	1.0	210
Age		
18-24	5.3	131
25-35	4.9	388
36 and above	0.8	255
Marital status		
Single/ never married	6.0	248
Married/ living with partner	2.8	497
Divorced/ widowed/ separated	5.4	37
Religion		
Christian	3.4	756
Muslim	8.7	23
Others	20.0	5
Education status		
No formal education	5.6	18
Primary level	5.1	198
Secondary level	5.1	294
Certificate/ diploma level	1.5	205
University degree and above	4.1	74
Monthly income		
Ksh 0-10,000	7.5	267
Ksh 10,001-30,000	2.1	332
Ksh 30,001-50,000	2.1	48
Ksh 50,001 and above	1.6	61
Sector type		
Formal	1.9	417
Informal	6.4	373
Private sector	**4.1**	**790**

30-Day (Current) Bhang/Marijuana Use

Informal sector employees are more likely to have used bhang/marijuana in the past 30 days (6.4%) compared to the private sector as a whole (4.1%) and formal sector employees (1.9%; Table 19). Females in the private sector were less likely to have used bhang/marijuana in the past 30 days (1.0%) compared to males (5.2%; Table 19).

30-day bhang/marijuana use prevalence in the private sector was highest among private sector respondents aged 18-24 years and 25-35 years (5.3% and 4.9%, respectively) compared to 0.8% among respondents 36 years and above (Table 19). Single/never married respondents were more likely to have used bhang/marijuana in the past 30 days (6.0%) compared to divorced/widowed/separated private sector respondents (5.4%) and married private sector respondents (2.8%; Table 19).

Participants of other religious affiliation were more likely to have used bhang/marijuana in the past 30-days (20%) compared to Muslims (8.7%) and Christians (3.4%; Table 19). Private sector respondents with no formal education had the highest prevalence of 30-day bhang/marijuana use (5.6%) followed by respondents with primary education and secondary education (each 5.1%), university degrees and above (4.1%), and diploma/ certificate (1.5%; Table 19).

Private sector respondents with a monthly income of Ksh. 0-10,000 were more likely to have used bhang/ marijuana in the past 30 days (7.5%) followed by those with an income of Ksh. 10,001-30,000 and Ksh. 30,001- 50,000 (each 2.1%), and Ksh. 50,001 and above (1.6%; Table 19).

5.6 Cocaine Use

5.6.1 Lifetime Cocaine Use

Table 20: Lifetime cocaine use

Variable	Lifetime cocaine use (%)	Total (n)
Gender		
Male	0.9	580
Female	0.5	210
Age		
18-24	1.5	131
25-35	1.0	388
36 and above	-	255
Marital status		
Single/ never married	1.6	248
Married/ living with partner	0.2	497
Divorced/ widowed/ separated	2.7	37
Religion		
Christian	0.4	756
Muslim	0.1	23
Others	-	5
Education status		
No formal education	-	18
Primary level	-	198
Secondary level	1.4	294
Certificate/ diploma level	0.5	205
University degree and above	1.4	74
Monthly income		
Ksh 0-10,000	0.7	267
Ksh 10,001-30,000	0.3	332
Ksh 30,001-50,000	-	48
Ksh 50,001 and above	1.6	61
Sector type		
Formal	0.5	417
Informal	1.1	373
Private sector	**0.8**	**790**

Lifetime Cocaine Use

The prevalence of lifetime cocaine use among private sector employees was 0.8%. When delineated by sector, informal sector employees were more likely to have used cocaine in their life (1.1%) compared to formal sector employees (0.5%; Table 20). Females in the private sector had a lower lifetime prevalence of cocaine use (0.5%) compared to males (0.9%; Table 20). 18-24 and 25-35 year-old private sector respondents were more likely to have used cocaine in their lifetime (1.5% and 1.0%, respectively; Table 20).

Divorced/widowed/separated private sector respondents were the most likely to have used cocaine in their lifetime (2.7%) compared to single/never married private sector respondents (1.6%) and married respondents (0.2%; Table 20). Muslims were more likely to have used cocaine in their life (4.3%) compared to Christians (0.4%; Table 20). Private sector respondents with university degrees and above and secondary education had the highest prevalence of lifetime cocaine use (each 1.4%). The prevalence of lifetime cocaine use among participants with secondary education, university degree and above and diploma/certificate was 1.4%, 1.4%, 13.1% and 0.5%, respectively (Table 20). Respondents in the highest income bracket (Ksh. 50,001 and above) were more likely to have used cocaine in their life (1.6%) compared to those in the lower brackets of Ksh. 0- 30,000 (1.0%; Table 20).

5.6.2 12-Month/Annual Cocaine Use

Table 21: 12-month cocaine use

Variable	12-month cocaine use (%)	Total (n)
Gender		
Male	0.2	580
Female	-	210
Age		
18-24	0.8	131
25-35	-	388
36 and above	-	255
Marital status		
Single/ never married	-	248
Married/ living with partner	-	497
Divorced/ widowed/ separated	2.7	37
Religion		
Christian	-	756
Muslim	4.3	23
Others	-	5
Education status		
No formal education	-	18
Primary level	-	198
Secondary level	0.3	294
Certificate/ diploma level	-	205
University degree and above	-	74
Monthly income		
Ksh 0-10,000	0.4	267
Ksh 10,001-30,000	-	332
Ksh 30,001-50,000	-	48
Ksh 50,001 and above	-	61
Sector type		
Formal	0.2	417
Informal	-	373
Private sector	**0.1**	**790**

12-month prevalence for cocaine use was 0.1% in the private sector as a whole and 0.2% in the formal sector (Table 21). Respondents in the sample of private sector employees that were likely to have used cocaine in the past 12-months were male (0.2%) aged between 18-24 years (0.8%; Table 21). Respondents that had used cocaine in the past 12-months in the sample of private sector employees were likely to be divorced/widowed/ separated (2.7%), were likely to be Muslims (4.3%), were likely to have secondary education (0.3%), and were likely to be in the lowest income bracket of Ksh. 0-10,000 (0.4%; Table 21).

5.6.3 30-Day/Current Cocaine Use

Table 22: 30-day cocaine use

Variable	Current cocaine use (%)	Total (n)
Gender		
Male	0.2	580
Female	-	210
Age		
18-24	0.8	131
25-35	-	388
36 and above	-	255
Marital status		
Single/ never married	-	248
Married/ living with partner	-	497
Divorced/ widowed/ separated	2.7	37
Religion		
Christian	-	756
Muslim	4.3	23
Others	-	5
Education status		
No formal education	-	18
Primary level	-	198
Secondary level	0.3	294
Certificate/ diploma level	-	205
University degree and above	-	74
Monthly income		
Ksh 0-10,000	0.4	267
Ksh 10,001-30,000	-	332
Ksh 30,001-50,000	-	48
Ksh 50,001 and above	-	61
Sector type		
Formal	0.2	417
Informal	-	373
Private sector	**0.1**	**790**

30-day prevalence for cocaine use was 0.1% in the private sector as a whole and 0.2% in the formal sector (Table 22). Respondents in the sample of private sector employees that were likely to have used cocaine in the past 30 days were male (0.2%) aged between 18-24 years (0.8%; Table 22). Respondents that had used cocaine in the past 30-day in the sample of private sector employees were likely to be divorced/widowed/ separated (2.7%), were likely to be Muslims (4.3%), were likely to have secondary education (0.3%), and were likely to be in the lowest income bracket of Ksh. 0-10,000 (0.4%; Table 22).

5.7 Heroin Use

5.7.1 Lifetime Heroin Use

Table 23: Lifetime heroin use

Variable	Lifetime heroin use (%)	Total (n)
Gender		
Male	0.7	580
Female	-	210
Age		
18-24	0.8	131
25-35	0.8	388
36 and above	-	255
Marital status		
Single/ never married	0.8	248
Married/ living with partner	0.2	497
Divorced/ widowed/ separated	2.7	37
Religion		
Christian	0.3	756
Muslim	4.3	23
Others	20.0	5
Education status		
No formal education	-	18
Primary level	0.5	198
Secondary level	1.0	294
Certificate/ diploma level	-	205
University degree and above	-	74
Monthly income		
Ksh 0-10,000	0.7	267
Ksh 10,001-30,000	0.6	332
Ksh 30,001-50,000	-	48
Ksh 50,001 and above	-	61
Sector type		
Formal	0.2	417
Informal	0.8	373
Private sector	**0.5**	**790**

Lifetime Heroin Use

The prevalence of lifetime heroin use among private sector employees was 0.5%. When delineated by sector, informal sector employees were more likely to have used heroin in their life (0.8%) compared to formal sector employees (0.2%; Table 23). Respondents in the sample of private sector employees that were likely to have used heroin in their lifetime were males (0.7%; Table 23). 18-24 and 25-35 year-old private sector respondents were more likely to have used heroin in their lifetime (each 0.8%; Table 23). Divorced/widowed/separated private sector respondents were the most likely to have used heroin in their lifetime (2.7%) compared to single/never married private sector respondents (0.8%) and married respondents (0.2%; Table 23).

Respondents with other religious affiliations were more likely to have used heroin in their life (20.0%) compared to Muslims (4.3%) and Christians (0.3%; Table 23). Respondents in the sample of private sector employees that were likely to have used heroin in their lifetime had secondary or primary education (1.0% and 0.5%, respectively; Table 23). Respondents in the lowest income brackets (Ksh. 0-30,000) were more likely to have used heroin in their life (1.3%; Table 23).

5.7.2 12-Month/Annual Heroin Use

Table 24: 12-month heroin use

Variable	12-month heroin use (%)	Total (n)
Gender		
Male	0.3	580
Female	-	210
Age		
18-24	0.8	131
25-35	0.3	388
36 and above	-	255
Marital status		
Single/ never married	-	248
Married/ living with partner	0.2	497
Divorced/ widowed/ separated	2.7	37
Religion		
Christian	0.1	756
Muslim	4.3	23
Others	-	5
Education status		
No formal education	-	18
Primary level	-	198
Secondary level	0.7	294
Certificate/ diploma level	-	205
University degree and above	-	74
Monthly income		
Ksh 0-10,000	0.4	267
Ksh 10,001-30,000	0.3	332
Ksh 30,001-50,000	-	48
Ksh 50,001 and above	-	61
Sector type		
Formal	0.2	417
Informal	0.3	373
Private sector	**0.3**	**790**

12-Month/Annual Heroin Use

12-month prevalence for heroin use was 0.3% in the private sector as a whole, and 0.3% in the informal sector and 0.2% in the formal sector (Table 24). Respondents in the sample of private sector employees that were likely to have used heroin in the past 12-months were male (0.3%) aged between 18-24 years (0.8%) and 25-35 years (0.3%; Table 24). Respondents that had used heroin in the past 12-months in the sample of private sector employees were more likely to be divorced/widowed/separated (2.7%) compared to married respondents (0.2%; Table 24). Respondents that had used heroin in the past 12-months in the sample of private sector employees were more likely to be Muslims (4.3%) compared to Christians (0.1%). Respondents that had used heroin in the past 12-months in the sample of private sector employees were more likely to have secondary education (0.7%), and were likely to be in the lowest income bracket of Ksh. 0-30,000 (0.7%; Table 24).

5.7.3 30-Day/Current Heroin Use

Table 25: 30-day heroin use

Variable	Current heroin use (%)	Total (n)
Gender		
Male	0.3	580
Female	-	210
Age		
18-24	0.8	131
25-35	0.3	388
36 and above	-	255
Marital status		
Single/ never married	-	248
Married/ living with partner	0.2	497
Divorced/ widowed/ separated	2.7	37
Religion		
Christian	0.1	756
Muslim	4.3	23
Others	-	5
Education status		
No formal education	-	18
Primary level	-	198
Secondary level	0.7	294
Certificate/ diploma level	-	205
University degree and above	-	74
Monthly income		
Ksh 0-10,000	0.4	267
Ksh 10,001-30,000	0.3	332
Ksh 30,001-50,000	-	48
Ksh 50,001 and above	-	61
Sector type		
Formal	0.2	417
Informal	0.3	373
Private sector	**0.3**	**790**

30-Day/Current Heroin Use

30-day prevalence for heroin use was 0.3% in the private sector as a whole, 0.3% in the informal sector, and 0.2% in the formal sector (Table 25). Respondents in the sample of private sector employees that were likely to have used heroin in the past 30 days were male (0.3%) aged between 18-24 years (0.8%) and 25-35 years (0.3%; Table 25). Respondents that had used heroin in the past 30-day in the sample of private sector employees were likely to be divorced/widowed/separated (2.7%) compared to married respondents (0.2%; Table 25). Respondents that had used heroin in the past 30 days in the sample of private sector employees were more likely to be Muslims (4.3%) compared to Christians (0.1). Respondents that had used heroin in the past 30 days in the sample of private sector employees were more likely to have secondary education (0.7%), and were likely to be in the lowest income bracket of Ksh. 0-30,000 (0.7%; Table 25).

5.8 Prescription Drug Use

5.8.1 Lifetime Prescription Drug Use

Table 26: Lifetime prescription drug use

Variable	Lifetime prescription drugs use (%)	Total (n)
Gender		
Male	9.5	580
Female	7.2	210
Age		
18-24	5.3	131
25-35	10.1	388
36 and above	9.4	255
Marital status		
Single/ never married	4.5	248
Married/ living with partner	10.7	497
Divorced/ widowed/ separated	8.1	37
Religion		
Christian	8.9	756
Muslim	8.7	23
Others	-	5
Education status		
No formal education	5.6	18
Primary level	10.7	198
Secondary level	8.2	294
Certificate/ diploma level	10.3	205
University degree and above	4.1	74
Monthly income		
Ksh 0-10,000	12.4	267
Ksh 10,001-30,000	8.2	332
Ksh 30,001-50,000	8.3	48
Ksh 50,001 and above	3.3	61
Sector type		
Formal	8.2	417
Informal	9.7	373
Private sector	**8.9**	**790**

Lifetime Prescription Drug Use

The prevalence of lifetime prescription drug use among private sector employees was 8.9%. When delineated by sector, informal sector employees were more likely to have used prescription drugs in their life (9.7%) compared to formal sector employees (8.2%; Table 26).

Females in the private sector had a lower lifetime prevalence of prescription drug use (7.2%) compared to males (9.5%; Table 26). Lifetime prescription drug use prevalence in the private sector was highest among private sector respondents aged 25-35 years (10.1%) followed by respondents 36 years and above and 18-24 years (9.4% and 4.5%, respectively; Table 26).

Married respondents and divorced/widowed/separated private sector respondents in the private sector were more likely to have used prescription drugs in their lifetime (10.7% and 8.1%, respectively) compared to single/never married respondents (4.5%; Table 26). In this sample of private sector respondents Christians and Muslims were more likely to have used prescription drugs in their life (8.9% and 8.7%, respectively; Table 26).

Private sector respondents with primary education and diploma/certificate had the highest prevalence of life-time prescription drug use (10.7% and 10.3%, respectively) compared to respondents with secondary education, no formal education, university degrees and above (8.2%, 5.6%, and 4.1%, respectively; Table 26). Private sector respondents with a monthly income of Ksh. 0-10,000 were more likely to have used prescription drugs in their life (12.4%) compared to private sector respondents with an income of Ksh. 30,001-50,000, Ksh. 10,001-30,000, and Ksh. 50,001 and above (8.3%, 8.2%, and 3.3%, respectively; Table 26).

5.8.2 12-Month/Annual Prescription Drug Use

Table 27: 12-month prescription drug use

Variable	12-month prescription drugs use (%)	Total (n)
Gender		
Male	5.7	580
Female	5.2	210
Age		
18-24	4.6	131
25-35	6.2	388
36 and above	5.5	255
Marital status		
Single/ never married	3.6	248
Married/ living with partner	6.2	497
Divorced/ widowed/ separated	2.7	37
Religion		
Christian	5.8	756
Muslim	-	23
Others	-	5
Education status		
No formal education	5.6	18
Primary level	7.6	198
Secondary level	4.4	294
Certificate/ diploma level	5.9	205
University degree and above	4.1	74
Monthly income		
Ksh 0-10,000	9.0	267
Ksh 10,001-30,000	3.9	332
Ksh 30,001-50,000	6.3	48
Ksh 50,001 and above	3.3	61
Sector type		
Formal	5.3	417
Informal	5.9	373
Private sector	**5.6**	**790**

12-Month/Annual Prescription Drug Use

Informal sector employees are more likely to have used prescription drugs in the past 12-months (5.9%) compared to the private sector as a whole (5.6%) and formal sector employees (5.3%; Table 27). There was not a large difference between males (5.7%) and females (5.2%) in the private sector that had used prescription drugs in the past 12 months (Table 27).

12-month prescription drug use prevalence in the private sector was highest among private sector respondents aged 25-35 years and 36 years and above (6.2% and 5.5%, respectively) compared to 4.6% among respondents 18-24 years (Table 27). Married private sector respondents were more likely to have used prescription drugs (6.2%) compared to single/never married respondents (3.6%) and divorced/widowed/separated private sector respondents (2.7%; Table 27).

In this sample, Christians were more likely to have used prescription drugs in the past 12 months (5.8%; Table 27). Private sector respondents with primary education had the highest prevalence of 12-month prescription drug use (7.6%) compared to private sector respondents with diploma/certificate (5.9%), no formal education (5.6%), secondary education (4.4%) and university degrees and above (4.1%; Table 27).

Private sector respondents with a monthly income of Ksh. 0-10,000 were more likely to have used prescription drugs in the past 12-months (9.0%) compared to those with an income of Ksh. 30,001-50,000 (6.2%), Ksh. 10,001-30,000 (3.9%), and Ksh. 50,001 and above (3.3%); Table 27).

5.8.3 30-Day/Current Prescription Drug Use

Table 28: 30-day prescription drug use

Variable	Current prescription drugs use (%)	Total (n)
Gender		
Male	3.3	580
Female	3.8	210
Age		
18-24	3.8	131
25-35	3.9	388
36 and above	2.7	255
Marital status		
Single/ never married	2.8	248
Married/ living with partner	3.4	497
Divorced/ widowed/ separated	-	37
Religion		
Christian	3.6	756
Muslim	-	23
Others	-	5
Education status		
No formal education	5.6	18
Primary level	4.0	198
Secondary level	3.7	294
Certificate/ diploma level	2.4	205
University degree and above	2.7	74
Monthly income		
Ksh 0-10,000	6.0	267
Ksh 10,001-30,000	2.4	332
Ksh 30,001-50,000	2.1	48
Ksh 50,001 and above	-	61
Sector type		
Formal	2.6	417
Informal	4.3	373
Private sector	**3.4**	**790**

30-Day (Current) Prescription Drug Use

Informal sector employees are more likely to have used prescription drug in the past 30 days (4.3%) compared to the private sector as a whole (3.4%) and formal sector employees (2.6%; Table 28). Females in the private sector were more likely to have used prescription drug in the past 30 days (3.8%) compared to males (3.3%; Table 28).

30-day prescription drug use prevalence in the private sector was highest among private sector respondents aged 25-35 years and 18-24 years (3.9% and 3.8%, respectively) compared to 2.7% among respondents 36 years and above (Table 28). Married private sector respondents were more likely to have used prescription drugs in the past 30 days (.3.4%) compared to single/never married respondents (2.8%; Table 28).

In this sample of private sector respondents, Christians were the most likely to have used prescription drugs in the past 30-days (3.6%; Table 28). Private sector respondents with no formal education had the highest prevalence of 30-day prescription drug use (5.6%) followed by respondents with primary education and secondary education (4.0% and 3.7%, respectively), university degrees and above (2.7%), and diploma/certificate (2.4%; Table 28).

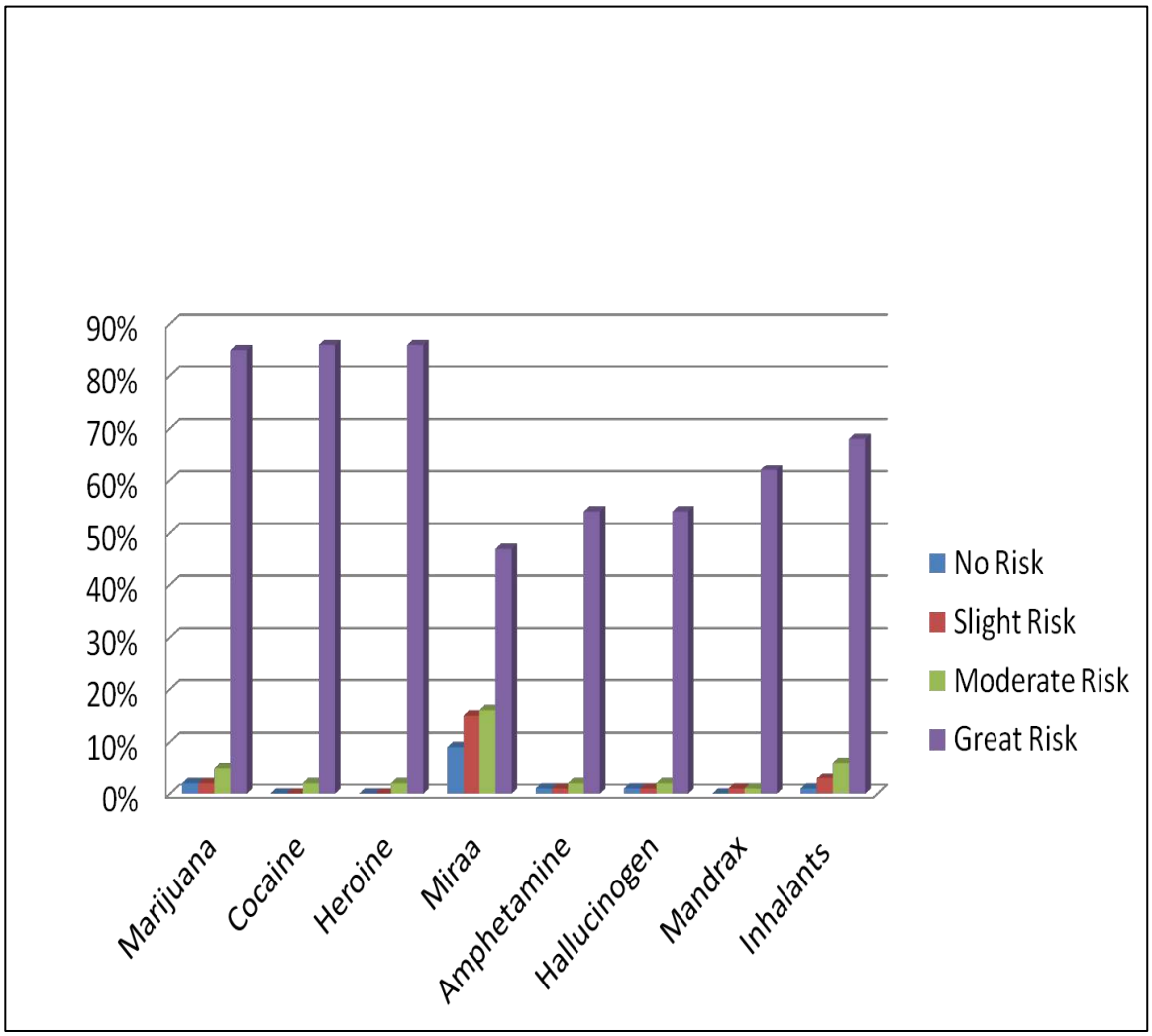
Private sector respondents in the lowest monthly income bracket of Ksh. 0-10,000 had the highest prevalence of prescription drug use in the past 30 days (6.0%) compared to those with an income of Ksh. 10,001-30,000 and Ksh. 30,001-50,000 (2.4% and 2.1%, respectively; Table 28).

5.9 Personal Perceptions on Alcohol and Drug Use

5.9.1 Perception of Risk from Other Drug Use

Participants were asked their perception on how much people risked harming themselves or others when they used different drugs (Figure 10). For all drugs, participants indicated that there was a great risk for harm. The risk related to *miraa* use was at 46.64% because others perceived there to be no risk to moderate risk. The remaining narcotics had high responses in the don't know/not sure category as many had not heard of the drugs.

Figure 10: Perception of the risk for harm from other drug use



5.9.2 Views on Alcohol and Drug Abuse

Participants were asked their perception on different aspects of alcohol and drug use. Participants did not agree that ADA is a private affair (79%); 64% didn't support the dismissal of drug abusers; 86% agreed that ADA was a disease like any other; 92% agreed that the government should provide rehabilitation centers; 60% disagreed that treatment and rehabilitation centers were accessible; 55% disagreed that rehabilitation centers were only for those with serious mental health problems; while 43% did agree that drug rehabilitation centers were run by trained professionals, 33% were unsure; 74% agreed that faith-based organizations were active in drug abuse prevention campaigns; 52% disagreed that drug treatment was affordable; 49% agreed that families and communities were not supportive of addicts while 46% disagreed (Table 29).

Table 29: Views on alcohol and drug abuse

View on Alcohol and Drug Abuse			
	Agree	**Disagree**	**Not Sure**
Alcohol and drug abuse is a private affair and should not be a community concern	21%	79%	1%
People who perform poorly due to their drug abuse problem should be dismissed from	34%	64%	2%
Alcoholism or drug addiction is a disease like any other and so addicts should be assisted by the government in every way	86%	12%	2%
The government should provide drug abuse rehabilitation centers to help addicts quit the habit	92%	6%	2%
Alcohol and drug addiction treatment and rehabilitation facilities in Kenya are accessible - easy to reach	24%	60%	16%
Drug rehabilitation facilities in Kenya are meant for people with serious mental health	27%	55%	18%
Drug rehabilitation facilities in Kenya are run by trained professional staff	43%	23%	33%
Faith-based organizations actively campaign against alcohol and drug abuse in my	74%	19%	7%
The cost of alcohol and drug addiction treatment and rehabilitation in Kenya is affordable	24%	52%	24%
Families/communities are not supportive of people with addiction	49%	46%	5%

5.9.3 Reasons Friends and Co-Workers Use Alcohol and Drugs

Participants were asked their perception on the reasons they thought their friends and co-workers used alcohol and drugs (Table 30). 72% indicated it helped them interact with others better; 80% indicated it helped them have fun; 76% indicated it helped people relax; 77% indicated it helped people kill time instead of going home early; 68% indicated it helped people relate with the opposite sex more freely; 73% indicated it helped people cope with stress; 56% indicated it made people feel important even though 39% did not agree with that.

Even though majority (52%) indicated that alcohol and drugs did not have health benefits, a significant proportion (40%) indicated it actually did have health benefits. While 51% disagreed that it made people work and think smart, a large number agreed that it did (44%). 56% did not agree that it enabled people get business deals while 36% indicated it did (Table 30).

Table 30: Reasons friends and co-workers use alcohol and drugs

Reasons Friends and Co-Workers Use Alcohol and Drugs		
	Yes	No
Helps people interact/associate with others better	72%	26%
Makes people have fun, feel good and happy	80%	18%
Makes people feel important	56%	39%
Makes people relax	76%	21%
It has health benefits like helping stomach problems	40%	52%
It helps people "kill time" than going home early	77%	22%
It helps people relate with the opposite sex more freely	68%	26%
Helps people cope with stress	73%	24%
Makes people work and think smart	44%	51%
Enables people get business deals	36%	56%

Both formal and informal sector key informant interviewees echoed the survey findings attributing the use of alcohol and drugs to four major factors:

1. Relational factors including peer pressure, a need to fit in, family problems.

   "I believe it's more or less peer influence where it's a Friday, they are hanging out or watching football on a Saturday, everybody has a beer on the table, why should I be left behind?" (***Formal Sector Interview 5: Lines 22-24***)

   "Others are just forced by their friends and you get that they are entering or engaging themselves into it." (***Informal Sector Interview 2: Lines 30-31***).

2. Social factors including fun and entertainment, idleness, earned income with no obligations especially for the young, and lack of awareness of the dangers of alcohol and drug use.

   "most of them who use drugs because they have a lot of disposable income from wherever they are getting and they don't have any relation or any, they don't have anything that is binding to the income that they are having, so you will find they have money, they don't know how to use it, they don't know, they have no commitments so they end up just misusing the money" (***Formal Sector Interview 6: Lines 25-29***).

   "…it is like idleness, maybe when someone has no job, he wakes up, goes to drink so that he can start wandering around. But if someone has a job and is busy, it is difficult to go drink." (***Informal Sector Interview 9 – Translated from Swahili: Lines 23-25***).

3. Environmental factors including parental or family use, unemployment, low cost of the local brews, ease of access especially within the informal settings most of which had bars nearby or within the market setting and some formal settings that allowed drinking at different organizational functions e.g. team building activities.

   "I would say some of them, they started as fun and then they ended up being addicts. So lets say in the teenage coz some of them do say they started when they were young and they reached a point that they could not do without, so up to now they are addicts. Some of them their family backgrounds, their parents are addicts, so they were trained since they were young. They have come up with it." (***Formal Sector Interview 11: Lines 21-25***).

   "..some of them use, because in this locality of ours where I come from, even school these people did not go. They go to school, get to class 8 and say they are done with school then they get into alcohol brewing. Now when they start brewing, then they have to use so that they can tell their friends or customers that it tastes good for them to try it too." (***Informal Sector Interview 4 – Translated***

from Swahili: Lines 21-25).

4. Psychological factors including stress

> "Some have stresses of life, they think the drug will act like something to soothe them, or just leisure." **(*Formal Sector Interview 1: Lines 23-24*)**.

> "One problem, here, you will hear someone say, today I have thoughts, let me drink so I can calm down those thoughts…." (***Informal Sector Interview 7 – Translated from Swahili: Lines 20-21***).

5.9.4 Reasons People Do not Use Alcohol and Drugs

Participants were asked their perception on the reasons they thought people did not use alcohol and drugs (Table 31). The top 5 reasons respondents indicated for why people did not use alcohol and drugs were personal principles (93%), personal decision to lead a drug free life (92%), past bad experiences with drugs (87%), awareness of health hazards (86%), and religious values (85%). Other reasons cited included being treated for use and stopped (82%), positive peer influence (80%), parental restrictions (72%), work/school commitment (65%) and fear of stigmatization (64%). Participants did not strongly feel that availability and cost of drugs influenced use significantly (76% and 65% respectively; Table 31).

Table 31: Reasons people do not use alcohol and drugs

Reasons People Do not Use Alcohol and Drugs		
	Yes	No
Drugs are not readily available	22%	76%
Drugs are too expensive	33%	65%
Personal decision to lead a drug free life	92%	7%
Fear of stigmatization	64%	33%
Parental restrictions	72%	27%
Awareness of health hazards	86%	12%
Positive peer pressure influence	80%	18%
Past bad experience with drugs	87%	11%
Religious values	85%	13%
Personal principles	93%	6%
Was treated for the use and stopped	82%	14%
Work/school commitment	65%	31%

5.10 Knowledge of Treatment and Rehabilitation Centers

Figure 11: Knowledge of rehab or treatment facilities

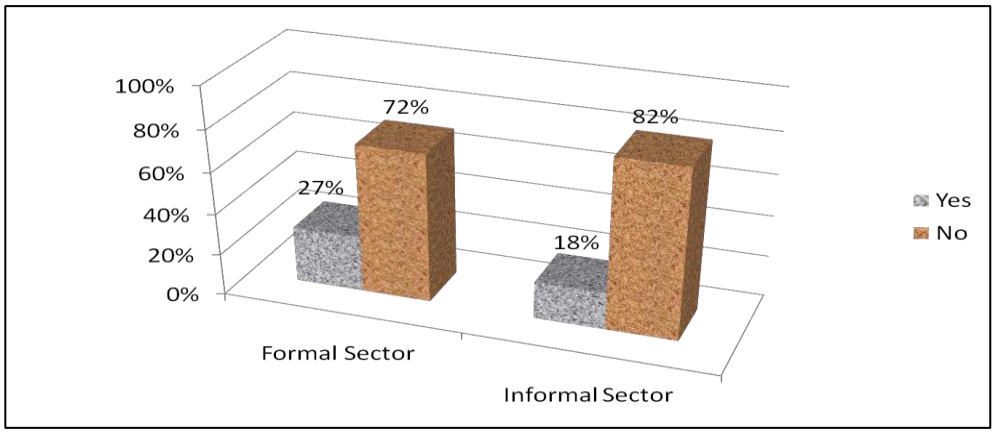
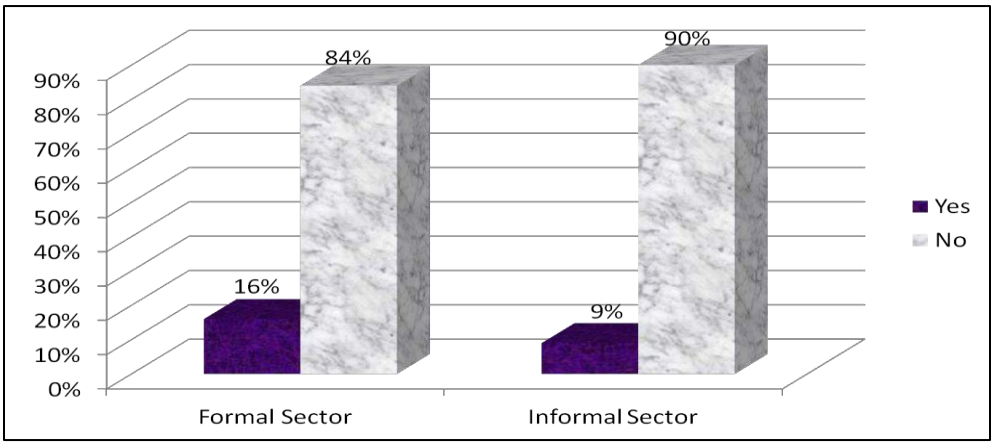


Figure 12: Knowledge of government treatment centers



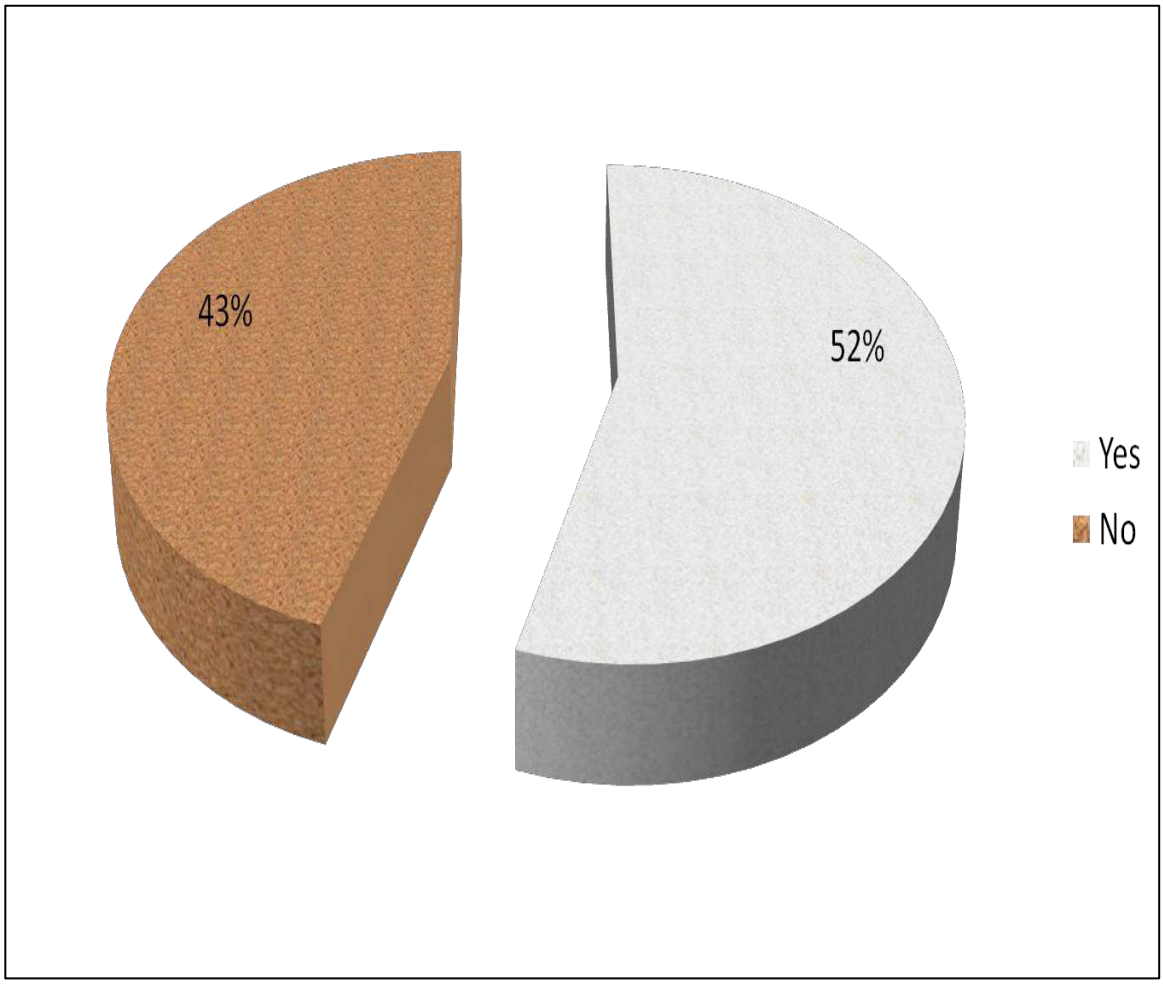
In general both formal and informal sector, employees did not have a lot of knowledge of rehabilitation or treatment programs run by non-governmental organizations (72% and 82%, respectively; Figure 11).

They also did not have a lot of knowledge of the existing government-run rehabilitation and treatment programs (formal = 84% and informal = 90%; Figure 12). Compared to the informal sector, formal sector employees had a little more knowledge about existing rehabilitation and treatment centers, whether government run or otherwise. 18% informal sector employees were aware of non-government centers compared to 27% formal sector employees (Figure 11). 16% formal sector employees had knowledge of government centers compared to 9% of informal sector employees (Figure 12). Some of the treatment programs mentioned included Karen rehabilitation center, Mathari mental hospital, Asumbi rehabilitation center, Omar project, Bustani rehabilitation center among others.

5.10.1 Effectiveness of Government Rehabilitation and Treatment Centers

Participants were asked their opinion on the government rehabilitation and treatment programs capability for dealing with drug addiction counseling, treatment and rehabilitation needs of the country. While 52% indicated that the government was capable in meeting treatment and rehabilitation needs in the country, a significant proportion did not believe so (43%; Figure 13).

Figure 13: Effectiveness of government rehabilitation and treatment centers



6.0 CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

6.1 Study Conclusions

While we are unable to generalize the findings of this study to the entire private sector, the study elicits rich data that provide a glimpse into the prevalence of alcohol and drug use within the sector, some of the knowledge, attitudes and beliefs of the private sector employees as relates to alcohol and drug use, and some of the policies that exist within the private sector to help prevent use or reduce use of alcohol and drugs as well as the treatment mechanisms or strategies in place for employees that need that level of assistance.

Additionally, the richness of this study is added by the inclusion of both formal and informal Jua Kali sector employees allowing for some insight into the differences that exist in the experiences of alcohol and drug abuse for the employees within those sectors. Utilization of a mixed methods approach also provided for an analysis that included not just survey information but the voiced perceptions of members of the private sector on some of the issues they are seeing firsthand that are related to alcohol and drug use and some of the ways they have handled them from a policy perspective and from a prevention and treatment perspective.

Data from both the surveys and the key informant interviews point to the fact that alcohol and drug abuse significantly affects the private sector just as it does the rest of the nation and the public sector employees. This section will outline some of the major findings from the survey data, implications and potential recommendations.

Major Finding #1: Alcohol is the Most Abused Substance Within the Private Sector

Both formal sector and informal sector interviewees indicated that alcohol and drug use was a significant problem in the workplace mostly affecting the young adult males between the ages of 25 and 45 years. This finding echoes the findings from the survey, which found alcohol to be the most abused substance. Informal sector employees mentioned the illicit brews like *chang'aa* and *busaa* as being the main concern since there were outlets within the markets for selling these products that were not well regulated. Though few in number, some formal sector organization participants indicated alcohol-based parties as an incentive for good work done, team building meetings or end-of-week closings. Compared to other substances, alcohol was the most abused substance by both formal and informal Jua Kali employees. Use among private sector employees represented by this sample also indicated higher lifetime and current use compared to the nation as a whole and the public sector employees. Average age of use for alcohol and other drugs was between 18 and 21 years for both males and females in the private sector.

The prevalence of lifetime use for alcohol among private sector employees was 65.9% compared to the public sector (57.90%; NACADA 2011). When segregated by

sector, findings revealed that formal sector employees had a slightly higher lifetime prevalence of alcohol use than their informal sector counterparts (66.9% and 64.9% respectively). Females in the private sector had lower lifetime prevalence (41.0%) compared to males (75.0%). Lifetime use prevalence in the private sector was highest among private sector respondents aged 36 years and above (72.5%) followed by 25-35 year-olds (63.9%) and 18-24 year-olds (55.7%). Divorced/widowed/ separated private sector respondents had the highest lifetime use (75.7%) followed by married private sector respondents (66.2%) and single/never married respondents (63.3%). Participants of other religious affiliation were more likely to have used alcohol in their life compared to Christians (65.9%) and Muslims (52.2%). Private sector respondents with university degrees and above had the highest prevalence of lifetime use (71.6%) followed by private sector respondents with a diploma/certificate (68.3%), primary education (67.7%) and secondary education (62.6%).

Private sector respondents with a monthly income of Ksh. 30,001-50,000 and Ksh. 50,001 and above were more likely to have used alcohol in their lifetime (77.0% and 70.8%, respectively) compared to those with an income of Ksh. 10,001-30,000 (69.9%) and Ksh. 0-10,000 (57.7%).

The prevalence of 12-month use for alcohol among private sector employees was 41%. In the past 12 months, more formal sector employees had used alcohol (43%) compared to their informal sector counterparts (38.7%). On most typical days, both men and women in the private sector consumed 4 or less drinks but males were more likely to binge or consume more than 5 drinks on a typical day. Private sector employees were more likely to be current drinkers (35.4%) compared to the public sector (33%; NACADA 2011). There was no significant difference in 30-day alcohol use between the formal and informal sector employees (35.6% and 35.2%, respectively).

A summary of other drug use is as follows:

- The prevalence of lifetime use for tobacco among private sector employees was 28% compared to the public sector (23%; NACADA 2011). Lifetime tobacco use was higher among informal sector employees (informal=32.2%; formal=24.8%). Informal sector employees are more likely to have used cigarette/pipe in the past 12-months (17.2%) compared to the private sector as a whole (14.3%) and formal sector employees (11.8%). The prevalence of 30-day cigarette/pipe was 13.8% in the private sector, 11.6% in the informal sector and 11.3% in the formal sector.

- The prevalence of lifetime use for chewing tobacco, snuff or *kuber* among private sector employees was 8.8%. Informal sector employees were 2.7% more likely to have used smokeless/chewing tobacco in their life compared to formal sector employees (10.2% and 7.5%, respectively). The 12-month prevalence of smokeless/chewing tobacco use in the private sector was highest among informal sector employees (5.1%) compared to the private sector as a whole (4.1%) and

the formal sector (3.1%). The 30-day prevalence of smokeless/chewing tobacco use in the private sector was highest among informal sector employees (4.0%) compared to the private sector as a whole (3.2%) and the formal sector (2.4%).

- Lifetime *khat/miraa/muguuka* use was higher in the private sector (25.3%) compared to the public sector (15.9%). Informal sector employees had a higher lifetime *miraa* use (30.6%) than their formal sector counter parts (20.7%). Informal sector employees are more likely to have used *khat/miraa/ muguuka* in the past 12-months (18.0%) compared to the private sector as a whole (13.8%) and formal sector employees (10.1%). Informal sector employees are more likely to have used *khat/miraa/muguuka* in the past 30 days (15.0%) compared to the private sector as a whole (10.9%) and formal sector employees (7.2%).

- The prevalence of lifetime bhang/marijuana use among private sector employees was 14.7%. When delineated by sector, informal sector employees were more likely to have used bhang/marijuana in their life (9.3%) compared to formal sector employees (5.4%). Informal sector employees are more likely to have used bhang/marijuana in the past 12-months (8.6%) compared to the private sector as a whole (5.3%) and formal sector employees (2.4%). Informal sector employees are more likely to have used bhang/marijuana in the past 30 days (6.4%) compared to the private sector as a whole (4.1%) and formal sector employees (1.9%).

- The prevalence of lifetime cocaine use among private sector employees was 0.8%. When delineated by sector, informal sector employees were more likely to have used cocaine in their life (1.1%) compared to formal sector employees (0.5%). 12-month prevalence for cocaine use was 0.1% in the private sector as a whole and 0.2% in the formal sector. 30-day prevalence for cocaine use was 0.1% in the private sector as a whole and 0.2% in the formal sector.

- The prevalence of lifetime heroin use among private sector employees was 0.5%. When delineated by sector, informal sector employees were more likely to have used heroin in their life (0.8%) compared to formal sector employees (0.2%). 12-month prevalence for heroin use was 0.3% in the private sector as a whole, and 0.3% in the informal sector and 0.2% in the formal sector. 30-day prevalence for heroin use was 0.3% in the private sector as a whole, 0.3% in the informal sector, and 0.2% in the formal sector.

- Prescription drug use compared to all other illicit drugs is noted as a growing problem among the sampled private sector employees. The prevalence of lifetime prescription drug use among private sector employees was 8.9%. When delineated by sector, informal sector employees were more likely to have used prescription drugs in their life (9.7%) compared to formal sector employees (8.2%). Informal sector employees are more likely to have used prescription drugs in the past 12-months (5.9%) compared to the private sector as a whole (5.6%) and formal sector employees (5.3%). Informal sector employees are

more likely to have used prescription drug in the past 30 days (4.3%) compared to the private sector as a whole (3.4%) and formal sector employees (2.6%). Females in the private sector were more likely to have used prescription drug in the past 30 days (3.8%) compared to males (3.3%).

Major Finding #2: While there are efforts geared towards prevention and treatment, more is needed

Participants acknowledged that alcohol and drug use was not a private affair and was a disease like any other. While they agreed that there were efforts at campaigning against the problem e.g. through faith-based organizations and the government as a whole, the cost of alcohol and drug addiction treatment and rehabilitation was not affordable (52% agreed) and the government needed to provide rehabilitation centers to help addicts quit the habit (92% agreed). Similarly, key informants from both the formal and informal sector acknowledged that the weight of the prevention and treatment of ADA use falls on every individual, business, community and the government. Even though all these sectors had a role to play, a lot of weight was placed on the role of the government in ensuring the implementation and regulation of stricter laws and the creation of awareness on the dangers of ADA use.

Major Finding #3: Knowledge of rehabilitation and treatment facilities is lacking

When asked about their knowledge of rehabilitation programs, whether government or non-government based, it was evident that employees in neither the formal or informal sectors had sufficient knowledge of their existence. While there might have not been a significant margin, more formal sector employees were aware of some treatment programs compared to their informal sector counterparts. 72% and 82% formal and informal sector employees respectively were not aware of non-government operated rehabilitation and treatment programs. 84% formal and 90% informal sector employees respectively, indicated they were not aware of government-based rehabilitation and treatment programs. As was found in the surveys, majority of the interviewees were not very familiar with existing government or non-government based rehabilitation and treatment programs and hence prevention revolved around talking with the offenders to quit, with consequences including warnings or citations, job loses, and pay cuts within the formal sector and such things as being terminated as a member of an informal sector association or losing a business spot at the market managed by the association. Neither formal nor informal sector organizations made direct referrals to formal substance abuse rehabilitation or treatment programs. At most, offenders were referred to hospitals and medical centers to seek help or provided in house counseling.

6.2 Discussion and Specific Recommendations for Working with the Private Sector

Data from both the quantitative surveys and the key informant interviews point to the fact that alcohol and drug abuse significantly affects the private sector just as it does the rest of the nation and the public sector employees. Both the survey and key informant interviews indicated that compared to other substances, alcohol was the most abused substance by both formal and informal Jua Kali employees.

Inclusion of both formal and informal Jua Kali sector employees allowed for some insight into the differences that exist in the experiences of alcohol and drug abuse for the employees within those sectors. Both formal sector and informal sector interviewees indicated that alcohol and drug use was a significant problem in the workplace mostly affecting the young adult males between the ages of 25 and 45 years. This finding echoes the findings from the survey, which found alcohol to be the most abused substance. Informal sector employees mentioned the illicit brews like *chang'aa* and *busaa* as being the main concern since there were outlets within the markets for selling these products that were not well regulated. Though few in number, some formal sector organization participants indicated alcohol-based parties as an incentive for good work done, team building meetings or end-of-week closings.

While it would seem that a choice should be determined on which group to focus prevention on, the data negates that approach acknowledging the unique differences between the sectors and also indicating that some substance use issues affect one group more than the other. Alcohol use as a whole was higher among private sector employees (65.90%) compared to the public sector (57.90%). When delineated by sector however, formal sector employees had a higher lifetime and 12-month use (66.90% and 43%) compared to their informal sector counterparts (64.90% and 38.70%). There was no significant difference in 30-day alcohol use between the formal and informal sector employees (35.6% and 35.2%, respectively).

With respect to other drug use, data indicated that private sector employees were more likely to have used compared to their public sector counterparts. For instance the prevalence of lifetime use for tobacco among private sector employees was 28% compared to the public sector (23%; NACADA 2011). Lifetime *khat/miraa/muguuka* use was higher in the private sector (25.3%) compared to the public sector (15.9%). When delineated by sector however, informal sector employees were more likely to have used tobacco, snuff, *khat/miraa/muguuka*, bhang/marijuana, cocaine, heroin, and prescription drugs compared to their formal sector counterparts. Qualitative data also revealed that a major concern within the private sector with regard to other drug use was the difficulty in detecting their use since they did not manifest as obviously as alcohol did.

As will be noted in the following section outlining specific recommendations, a more strategic approach is required in accessing the private sector. Rather than ask "how to penetrate the private sector to provide services?" the question should be "how can we

partner with the sector in providing services for their employees?" This is based on the acknowledgement from the data that indicates that both formal and informal sector associations have rules in place for their members that deter use during work hours. Our expectation going into the study was that there would be fewer regulations within the informal sector but with the creation of systemic infrastructure in the form of associations, employees in the informal sector were governed by sets of rules that did not allow them to be at the places of business under the influence of alcohol or other drugs. Similarly, formal sector organizations were governed by house rules and written policies that did not allow employees to be under the influence of any alcohol or other drugs while at work. Some of the private sector organizations even have organizations like Red Cross go in and provide regular trainings on the effects of substance use.

Specific recommendations for working with the private sector

1. There is need for a more systematic research within the private sector. Alcohol and drug use is a problem within the private sector just as it is within the nation and in the public sector. Since this study is not representative of the entire private sector, more rigorous studies should be conducted in the future. Future studies should also focus specifically on either sector, formal or informal to really capture the unique differences that define each sector and that may encourage or deter alcohol and drug use.
2. There is need to focus on prevention programs among the youth. With the age of initiation ranging between 18-21 years of age, prevention efforts should be geared towards the youth at a very young age, sensitizing them and their parents to the dangers of alcohol and drug abuse.
3. There is need to enhance enforcement of existing laws and policies on ADA in Kenya. While there is not an evidently significant use of the other illicit drugs, laws should be put in place to reduce their influx into the work settings.
4. There is need for adaptation of a systemic approach to prevention that includes social, environmental and individual factors. Participants from both the formal and informal sector acknowledged that the weight of the prevention and treatment of ADA use falls on every individual, business, community and the government. Even though all these sectors had a role to play, a lot of weight was placed on the role of the government in ensuring the implementation and regulation of stricter laws and the creation of awareness on the dangers of ADA use.
5. There is need to progressively enhance access to treatment and rehabilitation services and education increased education on existing treatment and rehabilitation programs.
6. There is need for NACADA to collaborate with private sector institutions like FKE and KEPSA to mainstream ADA prevention and treatment programs in the private sector workplace.

7.0 RESEARCH IMPLICATIONS AND LIMITATIONS OF THE STUDY

7.1 Research Implications of the Study

While the lack of generalizability limits the application of this study, it opens wide avenues for further research into ADA use within the private sector. Further studies should be conducted that focus on the unique differences in structure and format between the formal and informal sectors that may encourage or deter the use of alcohol and other drugs. Additionally, studies should be conducted that delineate the formal and the informal sectors by the five main sub-sector categories i.e., Trade; restaurants & hotels; Agriculture; Manufacturing; Finance; Insurance; real estate and business services and Transport, storage and communications to determine if there are any differences in ADA use based on the subsector of employment. More rigorous randomized studies should be conducted in the private sector so that more accurate comparisons can be made and generalized to the entire sector making it possible to provide the most effective prevention and treatment strategies. It will be important for the success of future studies that private sector organizations are involved in the planning and implementation of the research so that their questions and actual needs can be taken into account and incorporated into the process. NACADA can partner with organizations like KEPSA, FKE, KAM, KNFJKA, NISCO and others to design studies that will be of benefit to the sector as a whole. For better success in future studies, it is also important that accurate and complete databases are created for the registered and existing organizations and associations representing the private sector to allow for more systematic sampling techniques.

7.2 Limitations of the Study

As with any study this study had several limitations that could be corrected in future studies. The main one was the inability to randomize the sample which renders it impossible generalize the findings to the entire private sector. Even though the study was designed to be a national study, Mandera was not reached due to many refusals and lack of opportunity for the research team to find other ways to reach the organizations in the county. While this study does provide some rich data on the issues related to ADA within the private sector, it does not allow for delineation of the sector by the defined sub-sectors making it difficult to tell if there is variation in ADA use by sub-sector. Future studies as noted in prior sections should engage organizations like KEPSA, FKE and others in the planning and implementation of studies so that areas of concern identified by these groups can be studied in more detail. Both the quantitative and qualitative interviews were conducted face-to-face which may have led to some biases e.g., respondents saying what they "think" the researcher wants to hear. It may also have eliminated individuals who may have been interested in participating but not in the face-to-face format. Other strategies like online surveys, phone surveys etc. may be utilized in future studies to capture a wider population of those who are uncomfortable with face-to-face interviews.

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